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EDITORIALLY SPEAKING

THE WORLD CONFERENCE

The international convention of educational associations which will be held in Edinburgh in July will determine whether this organization is to be permanent and powerful or only a flash in the pan. The initial meeting at San Francisco two years ago brought a number of leaders together from both East and West and outlined a number of projects of great potential value. The reports at Edinburgh will show whether or not real progress is being made.

It will show also to what extent the representatives of such countries as Great Britain, China, Japan, and the United States can coöperate. In the preliminary work of the society the delegates from the United States took the initiative, wrote the agenda, and mapped out the program of committee work. At Edinburgh the situation will be quite different. The Scottish local committee has made the preliminary arrangements and will be chiefly responsible for the success or failure of the meeting. The reports from the standing committees will raise controversial issues relating not to theory but to actual practice. Different interests will be hard to reconcile.

There will be a change of officers and the Americans will find themselves in a position to follow and support instead of leading. This will provide the acid test. It is one thing to run with all your might when you have the ball; quite another to go ahead and make a way or push from behind. To be enthusiastic under those circumstances one must be devoted to the cause. He must wholeheartedly desire to win, no matter who has the ball. The Edinburgh convention will show whether genuine and effective international team play in education is possible at this time.

ECONOMY THROUGH ADJUSTMENT

The state of Connecticut is taking steps to bring its normal school work and the work of its public schools into harmony. Courses of study for the elementary schools and the practice schools are being worked out by joint committees made up of representatives from the normal schools, the public schools, and the State Department of Education. Students in training for

teaching are to be taught how to meet the actual situations that they will face.

Other states and many cities might well follow this excellent example. Normal schools in this country have quite too persistently been a law unto themselves. The courses in their training schools have often been built up with little regard to those actually operative in the schools for which the students in training were preparing. Some have gone so far as to urge that the young graduates of the normal school should be expected to revolutionize the courses of the schools into which they go.

Such an ideal fails to take into account the fact that the normal school graduate is a very young, very immature, and very inexperienced person indeed. Far from revolutionizing public school courses, the beginner is often so disturbed by the clash between things as they are and things as she expected them to be, that she abandons her newly acquired ideals of education almost entirely and becomes a mere conformist. In her violent reaction against normal school theories, such a young person is sometimes worse off in many ways than if she had never attended a normal school at all.

Economy in education demands that the normal school and the schools it serves get together. Let there be a thorough acquaintanceship and good understanding. Let the public school be in a position to meet the beginning teacher half way and carry forward without a break the training which the normal school has begun. The period of preparation and the average tenure are both so short that no working at cross purposes can possibly be afforded. Adjustment by means of the Connecticut or a similar plan is clearly indicated.

SCIENTIFIC ANALYSES OF TEACHING PROCEDURES

A. S. Barr

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There is a strong and growing feeling among those interested in the improvement of teaching that teaching usually thought of and spoken of as teaching *en masse* must be analyzed and carefully studied bit by bit. The possibility of making teaching and the supervision of teaching a science depends upon the success of the professional student of education in breaking up this complex mass into its innumerable elements and to study each objectively. In a way, this detailed analysis of teaching is just what has been going on during the last decade. The educational philosopher has been concerned with providing the goals of education; the administrator with providing proper physical conditions and an administrative organization; the curriculum builder with the selection and organization of subject matter; the methodist with effective teaching procedures; the educational psychologist with economical methods of learning; and the measurement specialist with evaluating the outcomes of teaching.

Supervision is concerned with the improvement of teaching and is a general agent, charged with coördinating and focusing these activities, to the end that the pupil may acquire that which we have designated as an education.

If one is interested, as superintendents, principals, and departmental supervisors are, in an objective evaluation of teaching, what then are the kinds of evidences that one should look for in the study of teaching? As one surveys tendencies in the study of teaching, the trend is to focus attention upon specific teacher and pupil activities rather than upon the personal shortcomings of the teacher. This is a part of a general movement to place supervision on a professional basis. It is the purpose of this discussion to indicate: (1) the general types of evidences (analyses) essential to good procedures in teaching and the improvement of teaching; (2) the possibility of applying scientific methods to the study of each of these aspects of teaching; (3) the organization of the results of investigations into objective outlines for the use of teachers, principals, departmental supervisors, and superintendents in the improvement of teaching.

In attacking the first of these problems, there seem, from an analysis of teaching into specific teacher and pupil activities and from an attempt to classify these activities into groups,[1] to be six kinds of activities in the classroom, or, from the standpoint of the supervisor, six types of evidences to look for in the study of teaching. These are: (1) evidences of successful management, including attention to physical conditions, the handling of materials, and discipline; (2) evidences of a wise selection of learning situations, pupil experiences, subject matter, etc.; (3) evidences of economical methods of learning, including a knowledge of the mental processes involved in the several types of learning; (4) evidences of effective teaching procedures; (5) evidences of good methods of getting work done, including provision for individual differences, organization of work around purposeful activities, etc.; and (6) evidences of acceptable standards of attainment.

These distinctions are not always clearly kept in mind by supervisors. A good example of the confusion of terms is the average person's differentiation between economical methods of learning (3, above) and effective teaching procedures (4, above). These are six types of learning: (a) acquiring motor control, (b) associative learning, (c) acquiring general and abstract meaning, (d) problem solving, (e) acquiring habits of enjoyment, and (f) mastery of social situations. For each of these there is a most economical *learning* procedure. There is also for each a most effective *teaching* procedure. Obviously the two procedures are not identical. An illustration of this difference is problem solving and the teaching of problem solving. There are given below, first, the steps in problem solving and, second, the *teaching procedure* (teacher activities) for problem solving, stated in terms of teacher activities.

[1] For a detailed statement of these activities, see A. S. Barr and others, *Elementary School Standards for the Improvement of Teaching*, Edwards Brothers, Ann Arbor, Michigan.

PROBLEM SOLVING

1. Recognition of some perplexity, confusion, or doubt.
2. Formulation of a tentative plan, guess, or hypothesis.
3. Collection and critical evaluation of data.
4. Analysis of the facts into elements.
5. Classification of like elements.
6. Tracing of relationships and sequences.
7. Generalization.
8. Verification (correspondence between prediction and actual happenings).

TEACHING PROBLEM SOLVING

1. Does the teacher keep the problem clearly before the pupils?
2. Does the teacher stimulate thought by
   (a) Assisting pupils to analyze situations into parts, aspects, or elements?
   (b) Suggesting definite hypotheses?
   (c) Recalling general principles?
3. Does the teacher encourage pupils to maintain an attitude of suspended judgment?
4. Does the teacher stimulate pupils to criticize each suggestion and to think out its possible consequences?
5. Does the teacher stimulate pupils to be systematic in selecting useful suggestions and rejecting useless ones?
6. Does the teacher stimulate pupils to collect information systematically?
7. Does the teacher assist pupils to analyze data into elements when this procedure seems profitable?
8. Does the teacher assist pupils to classify elements into groups of like elements when this procedure seems profitable?
9. Does the teacher assist pupils to trace relationships and sequences when this procedure seems profitable?
10. Does the teacher stimulate pupils to "take stock" of the results from time to time?
11. Does the teacher assist pupils to devise and use tabular and graphic methods of representation?
12. Does the teacher stimulate pupils to express concisely tentative conclusions derived from time to time?
13. Does the teacher stimulate pupils to verify their conclusions?

Any number of current discussions confuse teaching procedures and the mental processes involved in the different types of learning. It is one thing to know the mental steps by which pupils acquire general and abstract meanings, for example, and quite another to know the teaching procedure most effective in guiding the pupils in this process. In general, the first set of activities concerns itself with the mental processes involved in acquiring motor control, associative learning, problem solving, acquiring general and abstract meaning, and making social adjustments; the second, with effective teaching procedures and the directing of pupils in learning situations. The first constitutes things to know from the standpoint of the teacher, the second, things to do. Such distinctions as these need to be kept clearly in mind in the analysis of teaching.

The second problem of this discussion is to say briefly that it is possible to study objectively each of the major elements of teaching. Returning to the analysis given above, the first of these elements is management. Management consists of three items: (a) providing proper physical conditions, (b) effective methods of handling materials, and (c) control. The physical requirements are measurable: the temperature in degrees; the lights in angles and intensities; the ventilation in floor space per pupil or volume change per minute; and seating in inches. Similarly, the handling of material can be studied quantitatively from the standpoint of the time consumed or the time wasted. The general items to follow in another part of this article indicate the

exact nature of these materials. The element of control is more difficult.

The second major activity of the classroom is the selection of learning situations. The purpose of the numerous recent discussions of curriculum making has been to supply a basis for the scientific selection of subject matter. Probably from the standpoint of the supervisor additional criteria, that is, other than those supplied by curriculum makers — textbooks and courses of study — need to be set up for their guidance in studying the activities of recitation.

The third major element of teaching is a knowledge of the mental processes involved in the different types of learning. This is the problem at which psychologists have worked most industriously in recent years. The mental steps for each type of learning, if this knowledge is to be used in supervision and teaching, need to be reduced to a concise understandable statement.

The fourth factor in the teaching process is teaching procedures. So far there has been, to the knowledge of the writer, little attempt to say which procedures are best. Or, rather, there has been little attempt to support the offerings in this field by objective evidences. If a pupil experiences difficulties in problem solving, what should the teacher do? As a matter of fact, the pupil may experience difficulty at each of six or eight critical points in problem solving. The subject of effective procedures is one that needs to be studied experimentally.

Another element in the teaching process is the use of good methods of getting work done. This activity pertains to directing the larger learning situations of the classroom. The results of investigations of individual differences, the place of "motives," "purposes," and "drives" in the educative process, the general laws of learning, such as the laws of readiness, exercise, and effect, are now available to the classroom teacher and to the supervisor. The last element is that of standards of attainment. For each class of activities or learning situations, there is a corresponding standard of attainment. To what degree of perfection should classroom activity be carried? Measurement has done much to set standards for the total process. Studies need to be made of standards for each of the many elements within the process.

The third problem of this discussion is one of special interest to supervisors, and it is this: How can the scientific knowledge of the teaching process be brought to bear upon the study and improvement of teaching? It is humanly impossible to hold in mind while teaching or while supervising any considerable number of the characteristics of good teaching. What, for example, does the average principal see when he visits the classroom? Probably when the teacher is attractive, the pupils orderly, and the parents satisfied, the teaching is acceptable. Or, as one teacher expressed it, "If the children are neat and clean, on time, sing their songs well, and sit quietly in their seats, I am a teacher, *par excellence*." Something needs to be done to reduce what is known in education to a usable form. One procedure might be that of summarizing the characteristics of good teaching in the several fields of teaching

into outlines or "items to observe." The remainder of this article will be given over to a discussion of such outlines.

The scientific information now available is scattered through hundreds of studies. Frequently the findings are disputed, contradicted by previous or subsequent findings, or variously qualified. The situation is such in most of the fields of education that the lay educator is bewildered, knows not what to believe, and reverts to personal opinion, predilections, and prejudices. If the reader succeeds in extricating himself from this mass of conflicting evidence, he is confronted by a superabundance of unorganized material. What actually happens is that the reader — teacher, principal, or supervisor — reads each new book as it comes from the press, is greatly stimulated, and puts into practice the best of its ideas. A new publication arrives in due course of time, the teacher reads it, is greatly stimulated, again puts into practice the best of the ideas, and *forgets the first book*. As a result teachers are continually substituting one set of educational ideas for another instead of adding to their fund of information about teaching. There is, as has already been pointed out, need for a concise one, two, three statement of what we know in education.

A very helpful piece of work of this type was done by the Committee on Economy of Time in Education and reported in the *Eighteenth Yearbook* (Part II) *of the National Society for the Study of Education*. It was the intention of this committee to "gather all available data, published and unpublished, digest them critically, and base upon them summary statements applicable to classroom work." The following quotation from the "Principles of Method in Teaching Writing" will illustrate the plan of statement:

Rule 1. The writer should face the desk squarely.
Rule 2. Both forearms should rest on the desk for approximately three quarters of their length.
Rule 3. The paper should be directly in front of the writer.
Rule 4. The paper should be tilted to the left (or to the right in the case of the left-handed writer) until the lower edge makes an angle of about 30 degrees with the edge of the desk, and the writing should slope to the right.
Rule 5. The forearm should form a right angle with the baseline of the letters.
Rule 7. The hand should rest on the third and fourth fingers, not on the side.
Rule 9. The penholder should be grasped loosely.

Up to this point in the discussion, three facts have been emphasized: (1) that teaching thought of and spoken of *en masse* must be broken up into its major component parts; (2) that each of the elements of teaching must be studied scientifically; and (3) that the results, if they are to be used in teaching and the improvement of teaching, must be organized into concise one, two, three statements. From the standpoint of the supervisor there is, however, an additional problem: How can these findings be organized to eliminate the personal or judgment factor in the study of teaching?

Present standards for judging the quality of instruction are highly subjective. No two supervisors agree upon the quality of teaching observed. By actual trial, fifteen supervisors observing the same recitations gave fifteen

different opinions of the teaching. From the standpoint of supervision, it is not enough to know the characteristics of good teaching; supervisors must also know when they have seen good teaching. That is, what are the specific, observable evidences of good teaching?

Return to the discussion of problem solving. The steps in problem solving are: (1) recognition of some perplexity, confusion, or doubt; (2) formulation of a tentative plan, guess, or hypothesis; (3) collection and critical evaluation of data; (4) analysis of facts into elements; (5) classification of like elements; (6) tracing of relationships and sequences; (7) generalization; and (8) verification (correspondence between prediction and actual happenings). How is the teacher to know when the pupil follows the proper mental steps and when he does not? Obviously, if the teacher is to know when to assist and the supervisor how to assist, both must recognize the signs of pupil difficulties in problem solving. And if there is to be agreement between the teacher and supervisor as to when the pupil is in difficulty the evidences must be *observable*. There can be no agreement as to the quality of instruction and consequently no scientific criticism of teaching so long as we use general, ill-defined terms, such as, sense of justice, tact, force, personality, enthusiasm, adaptability, etc., or the general terms in which principles of teaching are usually formulated. We must get back of these general terms to the evidences upon which they are based. Back of each is a series of definite, objective, observable teaching acts. To take an example from the field of athletics: sportmanship, however desirable, is not observable. What we do observe is the exchange of greetings by opposing captains, the slugging of one player by another, the assistance of an injured opponent to his feet, etc. From these observable, objective data conclusions are drawn as to the sportsmanship of the teams. It is with these specific observable activities that teaching and the improvement of teaching must concern itself.

A good example of this type of organization may be found in the items to observe prepared by Dorothy M. La Salle, Assistant Supervisor of Health Education, Detroit Public Schools.[1] Some of the items selected from this list read as follows:

1. Is time wasted waiting in line?
2. Are the children dressed for play in five minutes?
3. Are coats, sweaters, rubbers, galoshes removed?
4. Are the children in soft, solid shoes?
5. Are balls, ropes, jump standards, and other gymnasium equipment ready for immediate use?
6. Are mats clean?
7. Are balls kept blown up?
8. Are jump standards equipped with pegs?
9. Are children permitted a freedom of choice in joining squads?
10. Do children with orthopedic defects receive individual attention? etc.

For the most part these items are objective and any number of supervisors might observe with approximately the same judgment of what had been seen. If one should examine further into these lists, however, many of the

[1] Barr and others, *Elementary School Standards for the Improvement of Teaching*, pp. 61–71. Edwards Brothers, Ann Arbor, Michigan.

items would be found to be highly subjective. But supervision to be at all scientific must be based upon objective evidence.

An example of this procedure, viewed from a slightly different point of view, is the studies of eye movements in reading. No one has examined directly the mental processes involved in reading, neither is it likely that anyone will do so. But through a very elaborate laboratory technique, the behavior of the eyes has been most minutely studied and from this conclusion has been drawn as to what goes on inside the individual's mind. From this point of view, the psychologist needs to do two things: (1) discover the mental processes, and (2) set forth the evidences that the classroom teacher should use in recognizing these processes.

The remainder of this paper will be given over to listing some of the general characteristics of teaching. For the most part, the items are neither scientific nor objective. But they do represent in a way the kind of material needed by the supervisors. The list must be *validated* and *translated into observable items*. From the standpoint of the individual making such lists, the number of items to observe must be greatly increased and, from the standpoint of the supervisor, the number must be reduced and standardized for immediate use. The list represents a starting point rather than a completed product.

Some General Items to Observe

1. The organization of the room for work.
   1. Attention to physical conditions.
      a. Are the pupils seated so that they get the best light available?
      b. Are the pupils seated by size and grade so as to make the most advantageous use of the seats available?
      c. Are such devices as are available utilized to provide an abundance of fresh air?
      d. Is the heat of the room maintained at an even and comfortable temperature?
2. The handling of materials.
   a. Is there an orderly routine for the passing and collecting of materials?
   b. Are suggestive materials — drawings, maps, charts, encyclopedias, reference books, etc. — in evidence?
   c. Can the drawings, maps, blackboard illustrations, etc., be clearly seen by the pupils?
   d. Are reference books, dictionaries, maps, etc., conveniently placed?
   e. Are laboratory materials not included in *b*, *c*, and *d* conveniently placed?
   f. Are materials to be used during the class period on hand and ready for use before the class period begins?
3. Other evidences of the economy of time in classroom management.
   a. Does the teacher begin the class work on time?
   b. Does the teacher check absences and tardiness with a minimum loss of time?
   c. Does the teacher waste time in attempting to find various articles about her desk, the place in the book, etc.?
   d. Does the teacher avoid writing long lists of problems, words, paragraphs, etc., on the blackboard during the recitation period?
   e. Does the class waste time because materials, books, supplies, or equipment are inconveniently placed?
   f. Does the teacher waste time in dictating outlines, lists of references, etc., that might have been supplied pupils in mimeograph form or placed on the blackboard prior to the recitation period?
   g. Does the teacher waste time in discussions and questions that were of interest only to the individual answering?
   h. Does the teacher waste time by explaining to the entire class the difficulties of a few pupils?

i. Does the teacher waste time by allowing rapid workers to wait for slower pupils?
j. Does the teacher waste time by making the class period mere recitations of work done out of class?
k. Does the teacher waste time by giving inadequate directions regarding work done out of class?

II. Provision for individual differences.
1. Does the teacher provide tasks which represent for each individual pupil the logical next step in his development?
2. Does the teacher so plan her work that each pupil may progress at his maximum rate?
3. Does the teacher so plan her work that she can give individual assistance to those who need it?
4. Does the teacher utilize such devices as are available in stimulating individual pupils to work up to capacity?
5. Does the teacher so direct the work of each individual that he masters thoroughly those exercises set for him?
6. Does the teacher plan adequate measures of work done?
7. Does the teacher so plan her work through group and individual activities that pupils may grow in the knowledge of human relationship as well as subject matter?

III. Evidences of purposeful activity upon the part of the pupils.
1. Focusing the pupils' attention.
a. Does the teacher show evidences of a definite, conscious, guiding aim in her work with pupils?
b. Does the teacher lead the pupils to discover problems for themselves and to purpose to solve them?
c. Does the teacher continue to motivate the work by appealing to the inherent worth of the subject matter or to the value of the project to the pupil?
d. Do the pupils show evidences of growth in ability to form worthy purposes and to achieve them effectively?
2. Self-direction.
a. Do the pupils understand what they are to do?
b. Do the pupils enter upon their work wholeheartedly and do they manifest a real and aggressive interest in it?
c. Do the pupils attack their problems with a definite study technique? (See below.)
d. Do the pupils ask questions freely when they do not understand?
e. Do the pupils lay out definite working plans for the guidance of their efforts?
f. Do the pupils voluntarily use books, pictures, maps, other people, etc., in order to obtain information and solutions to problems?
g. Do the pupils take advantage of opportunity to work independently when given an opportunity to do so?
3. Self-control.
a. Do the pupils seem to realize the value of time by promptness in getting to work?
b. Do the pupils go about their work in a quiet and orderly manner?
c. Do the pupils attend to their work without annoying fellow-workers?
d. Do the pupils avoid useless talking and confer in low voices when conferences are necessary?
e. Do the pupils wander aimlessly about the room?
f. Do the pupils handle equipment, books etc., quietly?
4. Self-appraisal.
a. Does the teacher provide opportunities for appraising the efforts of teacher and pupils?
b. Do the pupils know the goals toward which they are working?
c. Do the pupils keep records of individual progress in attaining goals?
d. Do the pupils know the standard accomplishment for boys and girls of their age and grade?
e. Do the pupils systematically compare their achievements with standard attainments for boys and girls of their age and grade?
5. Generalization.
a. Does the teacher relate the work of each unit to what has preceded and to what is to follow?

b. Does the teacher lead the pupils to specific application of new information, abilities, skills, etc.?

c. Does the teacher lead the pupils to a wider interpretation of experience gained?

IV. Knowledge of teaching procedures.

1. When the activity is one of directing motor activities:

a. Does the teacher fix attention upon good form or *best methods* of performing the act in question?

b. Does the teacher fix attention upon the movements which are to be made or upon the result which is desired rather than upon movements which are to be eliminated or the result which is not wanted?

c. Does the teacher fix attention upon the analysis of movements when analysis seems profitable? (While it is helpful at the beginning to think of each separate movement, attention may be given to details too long.)

d. Does the teacher fix attention upon training in elementary movements when that procedure seems profitable? (When training in elementary movements is attempted it should be provided as encountered in a complex act and not as isolated training.)

e. Does the teacher fix attention upon the sequence of movements when that procedure seems profitable? (Successive movements must follow one another in the proper time.)

f. Does the teacher fix attention upon correct models, demonstrations of procedure, etc.? (Verbal directions should be supplemented by demonstration of proper movements.)

g. Does the teacher fix attention upon practice? (A movement is learned through repetition.)

Note: Shop activities, gymnasium exercises, drawing, map-making, handwriting, typewriting, pronunciation of a foreign language, and certain laboratory exercises are examples of this type of learning.

2. When the activity is one involving *associative learning*, does the teacher employ known principles of learning?

a. Distributed repetitions are more economical than continuous repetitions.

b. The whole method of memorizing is better than by parts.

c. Learning accompanied by attention and interest is most economical.

d. Rhythm is an aid to learning.

e. Learning is quickest if the rate of repetition is as fast as is convenient for the individual who is learning.

f. Learning is much quicker if the material is repeated with the intention of learning.

g. Incorrect learning makes correct learning more difficult.

h. Associations should be made purposely and not left to chance.

i. Clear comprehension of ideas is necessary to permanent retention.

j. Rest before turning attention to new work makes retention more effective.

Note: The types of information memorized include: facts of history, biology, chemistry, sociology, etc.; vocabularies, English, German, French, Latin, etc.; selections of poetry, plots, characters, etc., in literature; and rules, definitions, and formulas.

3. When the activity is one of directing the mastery of subject matter:

a. Do the pupils waste time because of their ineffective methods of locating information (experience) in books, magazines, etc.?

b. Do the pupils employ the proper study technique at the proper time? (For example, the exercise may call for the collection of facts from many sources, the mastery of a given unit of subject, reading for enjoyment, etc.)

Note: Read the items under sections pertaining to *associative learning*, *problem solving*, the *acquisition of general and abstract meaning*, and the development of *habits of enjoyment* for other suggestions.

c. Is the work of the class so organized that subject matter is mastered in its functional relationships? (Study and memorization of subject matter as an *end*

in itself is a wasteful procedure. Information so acquired is rapidly forgotten.)

4. When the activity is one of providing practice or drill:
   a. Is the class led to appreciate the need for skill by setting a worthwhile problem that cannot be solved until skill is acquired?
   b. Is the class led to an appreciation of the skill which is to be acquired by the aid of illustrations, models, and demonstrations?
   c. Does the class activity conform to the laws of habit formation: (1) adequate repetition of the desired function to facilitate learning, (2) pleasurable consequences in learning, (3) attention during the process of learning, (4) consistency of correct response? (See *associative learning*.)
   d. Are the drill elements associated in their proper order?
   e. Are the associations formed in the way they are to be used?
   f. Are most interesting and less difficult exercises taken up first?
   g. Are the associations formed in definite situations (situations in which they are to be used)?
   h. Are unnecessary movements, elements, and processes eliminated?
   i. Is the drill work individual in character? (Drill is an individual process.)
   j. Are definite goals set toward which pupils may work?
   k. Are specific devices by which each pupil may measure his progress in attaining goals in evidence?
   l. Is time wasted in efforts to drill pupils beyond possible and desirable limits of improvability?
   m. Is the skill applied in new situations to test its adequacy and show its value?
5. When the activity is one of directing problem-solving:
   a. Does the teacher keep the problem clearly before the pupils?
   b. Does the teacher stimulate thought by
      (1) Assisting pupils to analyze situations into parts, aspects, or elements?
      (2) Suggesting definite hypotheses?
      (3) Recalling general principles?
   c. Does the teacher encourage pupils to maintain an attitude of suspended judgment?
   d. Does the teacher stimulate pupils to criticize each suggestion and to think out its possible consequences?
   e. Does the teacher stimulate pupils to be systematic in selecting useful suggestions and rejecting useless ones?
   f. Does the teacher assist pupils to collect information systematically?
   g. Does the teacher assist pupils to analyze data into elements when this procedure seems profitable?
   h. Does the teacher assist pupils to classify elements into groups of like elements when this procedure seems profitable?
   i. Does the teacher assist pupils to trace relationships and sequences when this procedure seems profitable?
   j. Does the teacher stimulate pupils to "take stock" of the results from time to time?
   k. Does the teacher assist pupils to devise and use tabular and graphic methods of representation?
   l. Does the teacher stimulate pupils to express concisely tentative conclusions derived from time to time?
   m. Does the teacher stimulate pupils to verify their conclusions?
6. When the activity is one involving the *acquisition of general meanings*, does the teacher strive to develop definite, clearly defined, vivid concepts, by
   a. Supplying fundamental (elemental) motor experiences (*e. g.*, "stepping off" a rod, lifting sixteen ounces, constructing a model, etc.)?
   b. Recalling previous personal experiences? (*E. g.*, A tiger may be defined by selecting some qualities from known members of the cat tribe and combining them with qualities of size and weight derived from other objects.)
   c. Recalling familiar examples selected to bring out common characteristics? (*E. g.*, the meaning of *matter* might be derived from familiar examples embodying the concept.)

d. Adding greater detail? (*E. g.*, the "Struggle for Independence" takes on meaning when details are given. Details are for background and are not to be memorized.)

e. Developmental exercises to give experiences out of which definite concepts may be derived? (*E. g.*, the word *tact* may be used in a dozen different sentences.)

f. Exact definition where exact definitions are essential? (*E. g.*, technical terms: in geometry: *line, surface, square;* in economics: *wealth, capital,* etc.; in physics: *work, heat, mass* need to be defined. Aid the pupils to keep summarizing the meaning or rule which they are gradually building up, eventually reaching a clear, concise statement of it.)

g. Practice in the use of the term, principles, or rule? (Provide well-selected exercises to give pupils practice in recognizing and using the new idea in new complex situations.)

7. When the activity is one of developing habits of enjoyment:

a. Does the teacher show unmistakable evidences of a real appreciation of the thing taught?

b. Does the teacher utilize materials suited to the stage of development that the pupils have reached? (Relatively simple activities are better to begin with than advanced, intricate ones.)

c. Do the pupils feel that the activity is immensely worth while for them?

d. Is information about the object supplied when information aids appreciation?

e. Does the teacher avoid detailed analysis, dissection, and criticism when the end sought is enjoyment?

f. Does the teacher subordinate drill, technical skill, and analysis of technique to wholehearted enjoyment except where the end sought is an understanding of technique?

g. Are there evidences of a conscious attempt to surround pupils with an abundance of desirable leisure-time activities from which they may choose? (Constant association with enjoyable activities brings a taste for them.)

h. Is the appreciation lesson so taught as to arouse within pupils feelings of satisfaction, pleasure, and enjoyment?

i. Does the teacher so present each activity that the pupils are stimulated to further activity?

j. Do the pupils show evidences of growth in the enjoyment of those leisure-time activities practiced by ordinary, well-behaved, cultivated people?

V. The selection and organization of subject matter.

1. Are the activities, pupil experiences, and topics studied of vital importance as determined by acceptable principles of curriculum construction?

2. Are the activities, pupil experiences, and topics studied those *relatively most important* for the pupils with whom they are used? (The question is not whether such topics are of worth, but of what *relative* worth. The teacher should distribute time according to relative values.)

3. Are the activities, pupil experience, and topics studied adapted to the individual capacity, training, and maturity of the pupils with whom they are used (not too easy or too difficult)?

4. Are the activities, pupil experiences, and topics studied thoughtfully varied to offer training through the use of type experiences: (a) observing, (b) doing, (c) reading (study), and (d) thinking (problem-solving)?

5. Are the activities, pupil experiences, and topics studied so organized that they can easily be mastered?

a. Are the units of instruction organized psychologically, that is, in terms of the pupil's previous experience?

b. Are the units of instruction organized logically, that is, in terms of the logical development of the subject itself?

c. Are the units of instruction organized functionally, that is, in terms of *activities* and *problems* by which information is used in its functional relationships?

VI. Opportunities for social growth.
1. Does the teacher set situations in which pupils are trained:
   a. To respect the opinions of others?
   b. To receive criticism graciously?
   c. To offer suggestions tactfully?
   d. To work together coöperatively?
   e. To share responsibility willingly?
   f. To sacrifice personal desires readily?
   g. To conform to conventions thoughtfully?
   h. To converse with others effectively?

VII. Evidences of participation, concentration, and attention.
1. Is each pupil actively engaged upon the project at hand? (This criterion is to be applied when the work is such as to demand pupil activity.)
2. Is each pupil attentive? (This criterion is to be applied when the work is such that pupils are to follow a discussion led by the teacher or by a member of the class.)
3. Do the pupils show evidences of concentration? (This criterion is to be applied when the work observed is a study period.)

VIII. Evidence of a scientific method.
1. Does the teacher take inventory of each individual's ability before and after teaching?
2. Does the teacher secure definite measures of educational progress?
3. Does the teacher plan remedial work only after a careful diagnosis of individual needs?
4. Does the teacher improve her technique through research and experimentation?

PRACTICAL SUGGESTIONS FOR TEACHERS IN THE FIRST AND SECOND PRIMARY GRADES

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This article is an attempt to give in a brief outline practical suggestions for teachers in the first and second primary grades, teaching in traditional public schools with classes of forty pupils per teacher. The teachers in these classes are attempting to use the intrinsic method, but they are limited to the extent that a definite prescribed standard of achievement in skills and knowledge is required at the end of each year period.

These suggestions are also written with the hope that after reading the outline certain school administrators might be willing to permit teachers, under their supervision, who desire to carry on this type of work to substitute it for the extrinsic school procedure.

The following topics will be considered:

I. General statement of principles underlying the teaching process.
II. Suggestions for classroom equipment and supplies.
III. Method of guiding experiences and evaluating progress.
IV. Method of recording progress of individuals and recording group progress.
V. Suggestive list of experiences possible for New York City children which might profitably be developed in these grades.
VI. Reports of class projects which have been developed in actual classroom practice.

I. General statement of principles underlying the teaching process.

It is extremely important in this type of teaching for the teacher to understand the underlying principles of the

teaching process and the particular needs of the children during the period of growth for which she is responsible.

In the extrinsic school procedure it has been possible for a teacher to put into practice methods of work which she has been taught without any very definite realization of the principles underlying the formation of the method.

In the intrinsic school procedure the child is followed, stimulated, and guided by the teacher and the method to be used will depend upon the child's individual tendencies and his social needs. An understanding of principles is therefore necessary if the teacher is to respond to the needs of the child.

To many teachers this seems at first an insurmountable difficulty, but to those who have made the change the joy and stimulation of child guidance rather than child dictation make them forever discontented with the extrinsic type of teaching.

The great problem of school administrators today is to know how to guide teachers to a realization of the value and joy of "intrinsic teaching."

The thoughtful consideration of the following statements in the light of daily classroom procedure will aid the teacher to grow in conscious, intelligent guidance:

"Education may be defined as a process of the continuous reconstruction of experience with the purpose of widening and deepening its social content, while at the same time the individual gains control of the methods involved." — DEWEY.

The activities in the classroom should be within the child's experience range and should lead on to richer and fuller experiences.

The ongoing activity should be difficult enough to challenge the child's ability but lie within his power of satisfactory accomplishment.

The children should frequently have an opportunity to meet a problem in its natural setting in order that all the factors involved may be met and solved.

The experiences should be varied and rich in outcomes so that the child is gaining his rightful inheritance of the best the race has to offer.

Learning must go on with the laws of learning. Learning is never single, but simultaneous. The teacher must not focus on primary learning without due regard to the associate and concomitant learnings.

The children should be guided in the progressive formation and appreciation of higher and higher standards of conduct and workmanship.

The teacher should be conversant with the normal interests and signs of growth for this period in order to intelligently guide the activities in the classroom so that the children achieve their highest possibility of growth.

The child should be given expert aid in the mastery of technique or school skills when the need arises in his ongoing activity and be given wise guidance in the acquisition of the knowledge necessary for the ongoing activity.

II. Suggestions for classroom equipment and supplies.

(These suggestions are in terms of present-day buildings, not in relation to plans that might be developed if a model building were to be erected.)

A. Equipment.

1. Physical apparatus should be provided that will exercise the larger muscles, such as slides, seesaw, jungle-gym, etc. This type of apparatus is of more benefit if it is in a covered out-of-door playground where the children can play in all kinds of weather. If this is not possible, at least one piece of this type of apparatus should be in the classroom.

2. Movable chairs and tables should be provided for the following reasons:

a. In order to secure floor space

when physical exercise is desired in the classroom for such activities as games, dramatics, rhythms, etc.

b. In order to most efficiently provide for group activities and group teaching when the ongoing activity demands this type of organization. Through skillful grouping of the tables and chairs, the teacher may aid the children in the formation of habits of concentration and industry — for example, the well-arranged secluded library corner giving an atmosphere of quiet and leisure, or the group of chairs near a convenient blackboard where the teacher can give her attention to the group that is ready for definite instruction in some of the early school skills.

3. Blackboards, low enough for the children to use with ease and comfort.

4. Bulletin board, for children's use in displaying printed notices, pictures, or other materials of current interest to the group.

5. Individual lockers, for children's unfinished work and personal supplies. These lockers may be secured in old buildings through providing additional cabinets or by having low shelves built in at one side of the room.

6. Piano and musical instruments such as clappers, triangle, drum and other percussion instruments.

7. A few choice pictures suitable for children of this age.

B. Supplies.

1. Attractive reading material:

a. At least forty different library books suitable for children of this age. These books should be widely different in the difficulty of the reading material in order to meet the varying needs of the individuals in the group and should provide a wide variety of subject matter, in poetry and prose, in order to stimulate the reading interests of the children and to provide fruitful information for the varying interests of the group.

b. Twenty readers that are alike for occasional group reading and discussion.

c. Attractive reading posters made by the teacher or the more advanced children with reading material of interest to the group at the moment. For example, a poster with a well-known Christmas poem and an attractive Christmas picture. (This poster material may sometimes be introduced by the teacher in the hope that it will stimulate a certain type of activity, or it may be developed by the children as an essential part of an ongoing class activity.)

2. Supplies for manual activities:

Work bench, carpenter tools, saw, hammer, nails, plane, vise, sandpaper, ruler, glue, wood of various lengths and thickness.

Sewing materials, such as cloth of different kinds, needles, thread, pins, scissors.

Paper of different colors, cardboard, paste, crayons, paint and brushes, clay.

Large and small blocks.

Printing press and typewriter.

3. Incidental supplies — supplies to stimulate ongoing activity, such as models of costumes if a May party is anticipated, models of valentines if a valentine sale is planned, etc. (These

models are rarely to be copied, but to be observed and criticized before the child plans his own work. Models of this type should be used only when an elaborate group project is being planned and the children ask for suggestions in developing their plans.)

4. Play materials, such as play house, dolls, dolls' house, housekeeping equipment, animals, trains, automobiles, balls, picture, word and number puzzles, etc. (This type of material is introduced for the purpose of stimulating social activities or to arouse interest in a worthwhile activity.)

5. Nature materials — plants, flowers, seeds, pet animals, such as rabbits, pigeons, etc. (The choice of nature materials may be determined by the interests of the group and season of the year, but in some form should always be present.)

III. Method of guiding experiences and evaluating progress.

A. Guiding experiences.

The teacher must fully realize her duty to stimulate and guide the group to varied and worthwhile activities. The following means may be used according to the needs of the particular situation:

1. Acceptance and encouragement of individual child's or group of children's self-initiated project.

Usually it is wiser to permit a rather non-fruitful type of activity to continue rather than allow the self-initiated impulse to be thwarted. There should, however, be a constant effort to guide the children to form higher and higher standards in their own choice of activity. The absolute veto of the child's self-initiated project should come only when the activity is harmful. The teacher, however, has a powerful influence in guiding the children's choice to worthwhile activities through the following indirect methods. (It is in this particular that a teacher's skill is most strongly shown in these lower grades.)

2. Recall of experiences common to the group. — The teacher may guide as a member of the group through bringing to their attention experiences common to them all which might be developed into worthwhile activities.

3. Changes in classroom environment. — The teacher may stimulate an interest in worthwhile activities through placing in the classroom materials (such as toys, books, pictures, nature materials) which may suggest to the children the development of some such activity. (Example: Child in the first year who had no interest in learning to read but who had an intense interest in radio. The teacher stimulated a desire to master the skill of reading by placing on the library table magazines and books on radio.)

4. Excursions. — The teacher may guide the ongoing activity by giving the group a common experience through a worthwhile excursion. (Example: Taking class to visit a post office to stimulate an interest in the writing symbols.)

5. Social situations. — The teacher may guide the group to desire to organize and develop ə social project by suggesting a social situation or by having them participate in a social situation started by some other group in

the school. (Example: Suggest inviting parents to a class entertainment.)

B. Evaluating progress.

Progress for these two school years can no longer be judged, as so frequently has been done in the past, solely on the child's progress in the school skills. Modern psychology tells us that, "For children of this age there must be an active response to a situation as the subject matter is really learned only through practical use."

Right habits depend upon the manner of the response and it is most essential that mastery of skills and acquisition of knowledge come through a situation in which the child responds in a wholehearted manner.

During this period progress should be measured in terms of individual growth rather than of grade achievement.

The following quotation from L. A. Palmer's syllabus for kindergarten and kindergarten extension classes gives a general statement of values by which a teacher may be guided in her judgment of the growth of children under her care during this period.

RESULTS IN TERMS OF KNOWLEDGE, HABITS, INTERESTS, APPRECIATIONS

1. Acquisition of knowledge of the immediate environment which can be utilized at the present moment and which will be valuable also for later school activity or in life outside of the school.

2. Formation of habits necessary for health and right thinking, for helpful association with other people, and for true enjoyment.

3. Arousing of interest in gaining a better understanding of the environment, that is, an interest in increasing the fund of profitable knowledge and in developing right habits of using it.

4. Appreciation of the better types of activity and results, appreciation so earnest and sincere that a child will make an effort to improve his own work and his surroundings.

IV. Method of recording progress of individuals and recording group progress.

A. Records of individual progress.

In his type of work the teacher's responsibility in record-making comes as a result of classroom activities and therefore is a recording of the activities of the child rather than an advanced prescription of his activities. As emphasis is placed on individual growth rather than on average attainments, it is more than ever necessary that individual records should be accessible for the teacher's consideration if she wishes to guide in the most efficient manner.

This is one of the big problems of the public school situation with the large number of children assigned to one teacher. Like many other problems it must be met with a compromise. Realizing fully the value of daily records of the activities of each child as kept in many experimental and private schools, it must be accepted as impracticable for the public school situation. This does not mean that records should be eliminated, but a short cut must be found. The following methods are suggested as possible in a public school situation:

1. The teacher may divide her group of forty into four divisions, checking for two weeks at a time the activities of ten children, in this way rechecking the groups every eight weeks.

2. The teacher may check all the children each day in one type of activity, in this way getting a more or less accurate record of the children's interests and attainments. (One day manual activities, next, reading activities, next, habits of conduct, etc.)

The first method, I think, is probably more fruitful as the teacher becomes expert in observing all the children each day, though she checks on her records the activities of only ten children.

B. Record of group progress.

In the past elaborate plan books and progress books have been devised by the teachers in order to show the satisfactory achievement of the group in grade standard of attainment. With the newer method of teaching, many teachers have fallen into what seems to me the error of feeling that group records are not important. If the teacher is going to take her responsibility seriously as the guide of the group's activities, it is necessary for her to check carefully the progress of group activities.

The following suggestive outline is submitted not alone for its value as a guide to the teacher, but in order to present to school administrators the outcomes of the classroom activities that develop through this method of teaching.

It is to be noted that each group activity would not necessarily show outcomes under each of the headings on the outline, but in so far as the teacher has intelligently interpreted the needs of the group she will endeavor to have the activities contribute to their particular needs, both of individual growth and of social adjustment. At the end of the two-year period the various subjects should have had a fairly well-balanced opportunity. This is, of course, to be determined by the needs of the particular group. In some cases, for instance, the desire or need for written English might not arise during this period and it might be wiser to defer this skill to a later time in the child's school life. My own experiences indicate that in the great majority of cases the normal activities and interests of the children will lead them to attempt the mastery of these traditional school skills and subject matter during this period.

SUGGESTIVE OUTLINE FOR RECORDING GROUP ACTIVITIES AND ACHIEVEMENTS

Group project
Length of time devoted to project
How initiated
Experiences
Aims: (a) Child's, (b) Teacher's
Climax
Projects stimulated by this experience
Habits of conduct encouraged by project
Oral English
Supplementary Reading
Written English
Arithmetic
Nature Study
Physical Training
Industrial Arts
Fine Arts

V. Suggestive list of experiences possible for New York City children which might profitably be developed in these grades.

This list is meant to be only suggestive. It is purposely made short in order not to suggest that it is inclusive of the best materials for these grades. One of the great joys of teaching with the intrinsic method is that each group of children brings to the classroom its own interests and personal experiences and so widens the horizon of the teacher to greater knowledge of the experiences that may profitably be developed during this period.

1. Experience of the new classroom environment. — Based upon

the child's arrival in new surroundings, his interest in this experience, and the necessity for him to become acquainted with the varying possibilities of the classroom.

2. Festival experiences. — Based upon the child's experiences in the home and on the street, and the selected knowledge brought to him by the teacher and the other children in the classroom.

3. Nature experiences. — Based upon the observation of changes in nature in the immediate environment of the school, as rain, snow, ice, birds, trees, germination work in the classroom, etc., and excursions to florist, parks, gardens, seashore, farm.

4. Industrial experiences. — Based upon the child's daily contact with the neighborhood stores and his interest in finding out more about the source of the materials they contain — fruit, grocery, stationery, millinery shops, etc. (At this age there is a keen interest in store play leading to elaborate construction in the reproduction of the neighborhood stores.)

5. Clothing experiences. — Based upon the child's play with dolls or upon the making of costumes for a festival.

6. Social experiences. — Based upon the children's desire to have their parents come to school and to prepare a program for them or upon some other equally valuable social desire.

VI. Reports of class projects which have been developed in actual classroom practice.

The following reports of classroom projects are here included in the belief that reports from teachers who are endeavoring to carry on this type of work and who are working under the usual public school conditions are extremely suggestive and helpful to teachers who are considering how to change their classroom procedure.

Valentine Project

Group project — Teacher, E. M. Weingart.
Length of time devoted to project—6 days.
How initiated: Suggested by the children.
Aims:

(a) Child's — To make valentines to give away. Later to play store.

(b) Teacher's — To aid the child in his desire to participate in a wholehearted manner in a social situation.

To aid the child to gain power in expressing his thoughts and skill in control of materials through the making of valentines.

To encourage the formation of higher standards of appreciation of artistic valentines.

To give opportunity for wholehearted practice in number combinations through store play.

Experiences:

In discussing dates of importance in the month of February, children mentioned Valentine's Day.

On February 9th, the children mentioned valentines in store windows and suggested making some for parents and friends.

Children remembered kindergarten experiences of making and sending valentines.

One child suggested that the children all make valentines at home over Saturday, Sunday, and Monday and that on Tuesday they play store with them.

Climaxes:
Delivering valentines.
Playing store.

Oral English:
Made up messages to be used on valentines.
Mentioned means of delivery — mail-box, letter-carrier, post office, mail train, boats, autos, etc.
Discussed development of project.

Reading:
Sentences made up by children and printed on blackboard:

We are making valentines for our parents.
We are going to make some for Miss Holmes.
We will send them to her in the mail.

Messages to be placed on valentines:

I love you.
Valentine's Greetings.
Loving Greetings.
With all my heart.
With my love.
Guess! Who sent this?

Silent reading to test understanding:

What day is today?
How many valentines did you receive?
To whom did you send your valentines?
How many valentines did you send?

Arithmetic:
Placing prices on valentines arranged in store: ten-, five-, three-, two-, one-cent valentines.
Money — one dime, one nickle, five pennies for each child.
Children suggested a test to see who should be storekeeper — "Must be good in number work."
Each child bought two valentines. Accounts were kept and amount left after purchase was made was recorded.

Fine Arts:
Arranged stock, made valentines, printed messages, wrote names and addresses.

The Garden

Group project — Teacher, C. M. Hauser.
Length of time devoted to project—6 weeks.

How initiated:
The children had had a millinery shop and wanted to have another shop. Various suggestions were made and finally the children decided on a flower shop. The garden naturally developed from this.

Aims:
(a) Child's — At first to have a flower shop, later to have a garden.
(b) Teacher's — To encourage the children's independence in starting new group projects.
To bring as many nature experiences as possible to the city child. These nature experiences to include a variety of spring nature materials and give the children experiences in the care and nurture of growing seeds and plants.
To aid in arousing the child's imagination in his outlook on the world of nature through poems, songs, and stories.
To dramatize the group activities in a worthwhile climax through the flower sale.

Experiences:
It was the time for planting; seeds were on sale in all the stores, flowers were seen everywhere.
Children visited florist, noticed variety of flowers, colors, and odors.
The garden was made out of a big window-box. Paths were laid with pebbles, a summer house was made out of blocks. Seeds were started in flower pots and seedlings were transplanted to garden. Potted plants and wild flowers were collected for sale.

Climax:
Flower sale. Visitors were invited. Each child bought a bunch of flowers or a potted plant with the toy money he had made. Completed box garden

was in evidence. Flower books were on exhibition.

Oral English:

Children discussed their plans for the project and their visit to florist.

Described pictures on seed packages.

Described their experiences in planting and what they saw in the garden day by day.

Described the various plants and flowers that were brought in.

Supplementary Reading:

The following are examples of sentences put on board:

On the seed packages is a picture of a garden.
A man is in the garden.
He is in the garden.
He is wearing overalls and a cap.
In his hands he has a rake.
There is a school near the garden.
A flag is waving from the roof of the school.
This school is not as big as ours.
It must be a country school. It has a slanting roof.
In our seed packages are morning glory seeds, sweet-pea seeds, candytuft seeds, or dwarf nasturtium seeds.
Today we planted cosmos seeds.
We are waiting for the little seeds to wake up.
The warm soft rain will wake them up.
The bright sunshine will say, "Wake up, little brown seeds."
Our room looks very pretty today.
We want it to look very pretty when our visitors come to our flower sale.
Yesterday, some of the children made a pretty border on the blackboard.
Alexander made the iris, Evelyn made the clovers, and Gertrude made the other flowers.

Spelling:

rake	rain	rose	dandelion	hoe
seed	up	box	buttercup	clover
cap	plant	warm	garden	leaf
our	leaves	dig	pink	man
root	spade	flower	dogwood	stones
green	wake	house	iris	water
brown	can	sun	lovely	bud
tulip	cosmos	overalls	stem	grow

Industrial Art:

Made hoe, rake, spade, water-can.

Made flower baskets of construction paper.

Decorated berry baskets, which were used at the sale.

Made money—cent, nickel, dime, and quarter.

Made and decorated pocketbooks.

Decorated room-border of flowers on blackboard.

Drew and cut out flowers which were used to make chart.

Made flower scrapbooks.

Art:

Drew from specimens the following flowers: crocus, arbutus, dogwood, lilac, iris, daffodil, tulip, Jack-in-the-pulpit, daisy, dandelion, violet, buttercup, clover, cosmos, black-eyed-Susan.

Made flower book.

Made invitations for flower sale.

Songs:

"Daffodil."
"Tulip."
"Robin Redbreast."
"Pretty Little Bluebird."
"Dandelion Song."
"Buttercup Song."
"We know a lovely garden."
"How I love my garden!"

Memorization:

"Ships sail on the rivers."
"In the heart of a seed."
"In my little garden bed."
"Good morrow, pretty rose bush."

Nature Study:

Kinds of seeds, appearance, size, color, etc.

Care of seeds, preparation of soil, loosening of soil around plants. Need of rain and sunshine.

Seedlings, parts, transplanting.

Common spring flowers—crocus, dogwood, lilac, daisy, buttercup, violet, dandelion, black-eyed-Susan.

Arithmetic:

Use of cent, nickel, dime, quarter.

Played store, flower market.

Flowers marked so as to drill in combinations of grade.

More than half the class taught themselves the combinations of the 2A grade. (This was the grade below the 2A.)

Lollypop Sale

Group Project — Teacher, C. H. Orr.

Length of time devoted to project — 8 days.

How initiated:

Children wanted more materials, discussed ways of raising money, decided on sale.

Aims:

(a) Child's — To raise money to buy supplementary materials.

(b) Teacher's — To encourage independence in solving problems.

Experiences:

Children visited candy shop in neighborhood.

Children bought candy at candy sale in another classroom.

Climax:

Final sale, when lollypops were sold.

Spending the money for word games, number games, paper, etc.

Oral English:

Children discussed their visit to the candy shop.

Discussed where they would like the shop to be, and how they could decorate it.

Discussed how to dress lollypops and how to make baskets for candy.

Discussed the kinds of invitations and what to write on them.

Supplementary Reading:

The following are the type of sentences dictated by the children and read from the board:

Today we went for a walk.
We went to the candy shop.
The man was kind to us.
He gave us some candy.
We are going to have a candy sale.
We are going to make lollypop dolls.
Today we are going to dress the dolls.
We have red paper for the dresses.
Today we are going to make baskets.
We have lollypop dolls and baskets filled with candy.
Today we are going to make invitations.
Please come and buy. Friday, 1 to 3.

Arithmetic:

Counting lollypops, baskets, candies, etc.

Combinations when playing store.

Writing prices.

Industrial Art:

Making baskets, dressing dolls, making price cards.

AN EVALUATION OF SOME OF THE METHODS USED IN THE DEVELOPMENT OF HEALTH HABITS

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In the great mass of literature on health education that has been produced in the last three years, much emphasis has been placed upon the expression of health ideas through the medium of pictures, health scrapbooks, health posters, and similar devices. So much has been written on the interest that the drawing of healthy, well-nourished children will develop, or the enthusiasm that may be aroused by picturing the iniquitous coffee pot as he scurries out of the room with the all-conquering milk bottle in hot pursuit, that many educators are beginning to ask if those directly responsible for health education conceive of this kind of work as constituting a basic procedure in health teaching.

Educators are questioning the value, for example, that the making of a health scrapbook has in developing health habits. They tell us that they are in no wise convinced that because a child experiences *satisfaction* in pasting pictures in his health scrapbook of the "baby sleeping with open windows" or of the "skinny boy who fails to drink his milk," that there is any guarantee that the same child will sleep with his windows open or will drink milk instead of tea or coffee. They suggest that the satisfaction experienced might tend to induce the child to paste more pictures in his scrapbook, but they cannot be sure that the satisfaction will eventuate in health habits suggested by the pictures pasted in his book.

In other words, they are asking what seems to be a very legitimate fundamental educational question. They want to know what real value this type of work has in helping boys and girls to live according to the best health standards. The philosophy which has often accompanied this rather extreme emphasis upon the motor expression of health ideals has been: "Make health play." This expression of the theory has probably helped make educators feel that the extensive use of pictures, of cutting, pasting, etc., was the practical working out of the conception, "Make health play."

No one would question that children enjoy cutting and pasting. Neither would anyone question the natural tendency of children to draw or interpret their ideas with pencil or crayon. And, if we interpret playful activity as purposeful activity, we must agree that in making their health scrapbooks they are engaged in playful activity and that unquestionably they have definite purposes when engaged in cutting, pasting, etc.

The real situation seems to be that in many instances the teacher has had one goal and the child another. The teacher's goal is to establish health habits. The child's goal is to cut and paste. The teacher feels that if he insists that

the cutting and the pasting have to do with pictures suggesting good health habits, *his* goal will be achieved. And he beholds with keen though naïve satisfaction a process which pleases the child, because the child instinctively likes to cut and paste, and he imagines that his goal — good health habits — is being achieved.

The truth seems to be that the situation has not been carefully analyzed. *We do not make activity play.* An activity is playful or not playful according as the child finds spontaneous satisfying purpose in the activity. Note the difference in the child's attitude in entering into the big-muscle activities. These activities have always been referred to as play activities, because they are self-impelled. No external coercion is necessary to cause the child to participate in them. All other divisions of our school curriculum have been classified as work. Why? There seems to be only one reason for such a division. All subjects of study have been largely superimposed by the adult, because the adult, feeling that the studies would be necessary for the child at some future time, forced the child to enter into them regardless of his interests, regardless of whether or not they were a means of achieving his own satisfying goals. It is probably unnecessary to suggest that this classification of the subjects of the curriculum as work or play is just one of the many examples of the haziness of our adult thinking when we focus our attention upon child problems.

An activity is play, not work, to the child just so far as he feels that each increment of effort helps him toward his own conscious goal. The child is just as eager to solve the problems of physics that *are* his problems (note our amateur radio experts) as he is to win the baseball game. It is an everyday experience in the Play School at the University of California to have the children more interested in their scientific activities than in their big-muscle activities. The child's attitude in any activity is the playful or interested attitude only in such degree as the activity leads on to his goal. In so far as it does not, his attitude is the work attitude.

A careful analysis indicates that the essence of the problem is found in the nature of the goal.

We believe that a fundamental organization of health education must center in the leadership of the vigorous, physical activities of child life because (1) in these activities the child gets his organic development, and (2) these activities offer the natural setting for the development of incentives to keep fit in order to enjoy the activities and to achieve. This is the basis for the introduction of information that will aid the child to reach his goals. He not only seeks the information that will help him solve his problems, but also evaluates it and molds his activities by it.

When we compare this procedure with that in which the child cuts out pictures and pastes them in a book, we find the difference to be in the nature of the goal.

The child gets intense satisfaction in his vigorous activity and he gets the exercise which gives organic development — a basic factor in health. He

is interested in his achievement and in his development. Problems arise. Information is sought that will help him in the solution of his problems — the attainment of his goal. This information is a necessary guide as to how to act in order to become strong and to keep fit in order to achieve his goals.

In the other situation the child's goal is to cut and paste. Any picture that appeals will satisfy, whether it be a picture of a healthy baby or of an aeroplane. The adult comes along and injects his goal — open windows, wholesome food, long hours of sleep, etc.—and insists that the child cut and paste pictures that portray adult goals. The child does not object, at least not very much, because after all he likes to cut and paste pictures of healthy babies and luscious fruit, and his real goal is being fulfilled — the satisfaction which comes in cutting and pasting.

In the first case, however, the subject matter is sought because it is an essential means of reaching a real goal. In the latter case adult ideas are injected into a natural process because the adult desires that the child deal with them. But there is not necessarily any relationship between the adult's goal and the child's goal.

If it is true that information controls conduct in proportion as the individual appreciates its value in realizing a life purpose, the relative educational value of the two procedures becomes apparent. That information has a value in healthful living is unquestionable.

Perhaps a comparison with the situation found in dramatization will make clearer the real value of the information. Children dramatize spontaneously. They dramatize all of the life activities which make a definite appeal to them. They play "keeping house." To carry on this activity they make play chairs, tables, etc. If given a chance, they will ask questions about the making of these articles of furniture, because the information is needed to solve the problems in the activity which will result in achieving their goals.

The adult conceives the notion that he will *use* this natural child tendency to dramatize as a means of reaching his adult goal — the establishment of ideals about health. Hence, he puts into dramatic form, which he hopes will appeal to the child, facts about long hours of sleep, the necessity of exercise, fresh air, sunshine, etc. He takes it for granted that these facts, because put into dramatic form, will be applied in conduct by the child in the same way that the information about how to make tables and chairs is utilized.

No argument is needed to show that there is no guarantee that the child will use information which comes to him unsought and which meets no urgent, immediate need, as he will use the information which he seeks because it is necessary for the attainment of some real goal.

The most that can be said for information presented to the child under such conditions is that there is always a *chance* that it may appeal. It may connect with some life problem and therefore may affect habits of conduct.

Obviously the nature of the goal is the decisive factor. In the cutting and pasting, as in the health drama, information or subject matter which the adult desires to instill is inserted by the

adult into an instinctively satisfying activity. In the big-muscle activities the child seeks the information because it is necessary to attain his goal. But the effect upon habits of conduct will depend upon how conscious the child is that the facts have value in fulfilling his developing aims.

The question arises always as to the possibilities inherent in such a situation of helping the child to see how the information will aid him to gain goals of which he is not yet conscious but of which he must become conscious if he is to develop into the most efficient person that it is possible for him to become.

There are possibilities along this line and there are also dangers. In this situation are involved the two most fundamental problems of education: (1) What are the real *interests*, the real problems at any given period in child life? (2) How are these problems to be most effectively guided so that they will not only satisfy the immediate child goal, but will lead on always toward the goals that civilization has deemed most valuable?

The problem of method involves thus a knowledge of adult goals and a knowledge of child goals. Our insatiable struggle through the centuries to establish clearly adult goals presents a striking contrast to our peculiar insensibility to the necessity of knowing child goals. We are only beginning to realize that adult goals and child goals are not identical, though they are identical in origin. And because they are identical in origin, it is possible, through right methods of leadership, to guide these developing goals on to the highest goals the race has conceived.

The mistake in leadership has been that we have been trying to put adult goals in place of child goals, instead of skillfully leading the child in his transition from his goals to the adult goal.

In health education, if we are to achieve the objectives which the adult conceives as most worth while, namely, men and women who will use their health information for a wise direction of their conduct, we must not be satisfied with methods that surreptitiously insinuate information about health into instinctively satisfying activities such as cutting, pasting, and dramatizing. We must, if we are to be certain of results, organize and lead the activities into which children naturally enter, which give development and organic power, and which demand, because of their intrinsic nature, health information in the achievement of their goals.

ADAPTING THE COURSE OF STUDY TO GROUPED STUDENTS

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During the past few years a number of experiments have been made to determine whether it is desirable to divide students into groups according to their ability, and the results of these experiments have been discussed in every school where such a division has been made. The advantages and disadvantages have been fairly well determined, and although those who expected miracles to happen and suns to burst forth from the sorting have been to a certain extent disappointed, there seems reason for belief that the grouping is to be desired.

For four years we have grouped the pupils in ninth-grade English in our high school, and during this time I have had the opportunity to study these different groups rather carefully. I have noticed, in working day after day with these children grouped according to their ability, that the greatest problem in the whole matter is to determine what methods are most effective in each of the different groups, and what adaptations of the course of study should be made to suit their different capacities.

It is my purpose to show, by a study of the groups at the two extremes, some of the fundamental differences in the groups, and some of the conclusions that we have come to in our school regarding the adaptation of the course of study to these groups.

By the expression, "the groups at the two extremes," I mean those very gifted children who are decidedly superior in intelligence, and whom I shall call Group A, and those children whose mentality tests are low, whom I shall call Group B. The children in Group A have an intelligence quotient of from 123 to 150. Those in Group B range from 74 to 88.

Let us first consider the problem of a course in literature. The purpose of teaching literature ought to be, I believe:

1. To make the child familiar with the great books and characters of literary tradition.
2. To develop the child's power of reading and his appreciation of good books.
3. To give him a broader view of life through the experiences and philosophies that he meets in books.

In analyzing the capacities and characteristics of these two groups it will soon be evident that they should read entirely different books and be treated in entirely different ways.

Let us look for a minute at the result of trying to teach the same book to both groups.

Ivanhoe was far too difficult for Group B. We no longer give it to them to read because we believe that if a book is taught that contains too many unfamiliar references, too many difficult words, or too complicated plot or character study, the pupil will merely be confused

when he attempts to read it; and although he may gain some knowledge of the characters in the story, thus accomplishing perhaps *one* of the purposes for which literature is taught, he will gain neither in reading power nor in appreciation of good literature, and may even develop a dislike for reading that will be difficult to overcome.

It has been found especially effective to give these slower children special kinds of reading lessons to help them gain in reading power that the children of the superior group do not need at all. Silent reading, stressing the different ways in which to read, vocabulary work, and training in acquiring speed are all very necessary in this one group.

In the teaching of composition the problem is slightly different. Here the aim should be to train the pupil to write with clearness, force, and ease. The

"IVANHOE" IS ASSIGNED TO BOTH A AND B SECTIONS

Group A	*Group B*
In this section 26 out of 30 in the class had some definite knowledge of the history of the time of Ivanhoe, and of the terms used in chivalry. Twenty-eight out of 30 could tell some fact about the crusades.	In this section only 4 out of 30 could give any fact connected with the period of the story, and not one, to his knowledge, had ever heard of the crusades.

In Group A the book was read with understanding.
In Group B they wondered what it was all about.

Group A	*Group B*
In this section the vocabulary was familiar to a certain extent, and although there were many words that needed explanation, there were not too many.	In this section the vocabulary was so difficult that it became necessary to interpret each paragraph.

In Section A more words were learned and reading power was increased.
In Section B there were so many new words that very few were really learned and reading power was not increased.

Group A	*Group B*
In this section discussions were started that brought out the pupils' views on moral, economic, and social questions of the period of Ivanhoe and of today.	In this section practically no discussions were carried on, and the pupils lacked power to analyze or compare the characters.

In Section A the pupils' philosophies of life were broadened, and their power to reason was increased.
In Section B the pupils gained nothing at all in this line.

From this it can be seen that the children in Group A have larger vocabularies than those of Group B; they are already acquainted with more books and characters; they have more reading power because they have a larger background of words and can grasp the meaning of what they have read more quickly. Hence they should be given books to read that require a far greater range of experiences, a more difficult vocabulary, and a more complicated philosophy.

children of Group A are already able to write fairly clearly. They have acquired a mastery of grammar and sentence construction. They are ready to improve their style and to learn how to produce work of real literary value. Moreover, the pupils in Group A have ideas. They have imagination and creative ability and they are ready for a different type of subject. Group B have few ideas. They want to copy, to reproduce things they have heard. Moreover, they are not able to write clearly. They need drill in the fundamentals of sentence structure and in the elements of clear thinking.

This year the boys of the A section wrote some free verse in imitation of a famous poet in this country, and a copy of some of the best poems were sent to the poet himself. He wrote to the class a very interesting and inspiring letter that made a deep impression on them. Some of the boys in that class will undoubtedly become writers — and they need to be encouraged to do original work.

The members of Group B, on the other hand, are incapable of doing work of this sort. They are ready only for concrete subjects and for narrative of the simplest sort. They need subjects that will suit their limited experiences and their limited capacity for expression.

There is one fact that seems to be very evident — that it is impossible to expect that the pupils in Group B will ever be capable of doing the same type of work as those in Group A, and that any attempt to bring about such results will prove very disappointing.

Summing up the characteristics of each group, their differences might be expressed as in the table below.

These two groups need decidedly to be treated in two different ways. The community needs both kinds of citizens — those who will lead and create, and those who will intelligently follow. The grouping of the boys and girls into sections according to their ability is of great value in aiding the teacher to meet the needs of distinctly different kinds of minds.

Group A	*Group B*
1. Have imagination.	1. Have no imagination.
2. Are interested in ideas and theories.	2. Are interested only in concrete subjects.
3. Are able to discuss motives for actions of characters they read about.	3. Are unable to get any insight into motives of the characters they read about.
4. Have large vocabulary and experience gained from extensive reading.	4. Have small vocabulary and few experiences gained from books.
5. Have power to remember and make use of facts.	5. Forget quickly and do not associate facts with other facts.
6. Have initiative and many original ideas.	6. Have no initiative, but a marked tendency to follow.
7. Have marked tendency toward creative ability.	7. Have no creative or inventive tendency.

THE DEVELOPMENT OF SENTENCE AND PARAGRAPH CONSCIOUSNESS THROUGH ORAL LANGUAGE

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The approach to development of sentence and paragraph consciousness may be made through almost any of the social studies. Once we used a very simply written story of Lewis and Clark, in connection with our history work, as a series of lessons in sight reading. At another time we reproduced reports made by individual pupils on chosen topics in connection with a transportation project that had developed out of geography and history. To illustrate the method employed, I shall use parts of the report worked up after a visit to an exhibit given by the United States Forest Service in behalf of forest preservation, and shall give a part of the socialized recitation by means of which pupils helped each other in developing sentences with the proper continuity to form paragraphs and thus to construct the report. I had the pupils report in the order in which they were seated. This avoided wasting time in calling on individuals; at the same time it gave the next child to recite a chance to think what his sentence should be about, in order to keep it in the continuous line of thought needed to form the paragraph.

1st child. We went to the Forest Exhibit, Thursday afternoon.

(*Note.* — Hands were raised by other pupils to give helps. First child called on each one.)

Helps (by different pupils). Don't we all know we went to the exhibit? What difference does it make what day it was? What did we learn there?

Same child trying again. Mr. Fair showed us how to build a camp fire and he told us about the forest fires.

Helps. Is Mr. Fair's name anything important? I suggest you make two sentences instead of connecting the two with *and.*

(*Note.* — I saw first child, while she stood thinking, form all the words with her lips as she thought out her final sentence, which was accepted by the class.)

Same child. At the Forest Exhibit we learned about the forest fires. We also learned how to build a camp fire.

2nd child. We saw an airplane with a Liberty motor.

Helps. Airplanes aren't about camp fires. You didn't continue about the same thing.

Same child. I can't think of anything to say about camp fires. Has anyone anything to add to this paragraph?

Helps. Do you leave all the pine needles close up to the fire?

(*Note.* — I tried to teach my pupils that they should not think for the pupil they were trying to help, and should never give the exact words for his sentence, but should get him to think for himself. I explained that questions were the best means of accomplishing this.

Same child. We learned to scrape back the pine needles for four or five feet before we build our fire.

3rd child. We learned that the best way to put out a fire is to put water and dirt on it.

Helps. Nearly everybody has begun with "We learned."

(*Note.* — I asked each child to give his sentence over and it was readily seen that *we learned* had been used too often.)

Same child. The best way to put out a camp fire is to throw water and dirt on it.

4th child. Anything more to add to the paragraph on camp fires?

(*Note.* — Nothing was given, so he began a new paragraph.)

Same child. When the trees grow big and tall, the forester comes and marks them with the axe so that the trees may be cut down.

5th child. He showed us about the trees in these mountains (goes to map and points), and there are more here than there (wanders off subject).

Helps. You put about a dozen sentences in one. It would have been better if you left out all those *ands* and *ers*. What mountains do you mean? Haven't they a name? What are these places called? Which mountains have the most National Parks?

Same child (after long thinking and several attempts). There are more National Parks on the Sierra Nevada Mountains than there are on the Coast Range.

6th child. Anyone is allowed to go to these National Forests if they want to see the beauty they hold.

7th child. They are good for irrigation.

Helps. What do you mean? How could trees irrigate?

Same child (after many attempts). The good that these trees do is to hold back the water and let it down gradually.

8th child. They always watch out to see that there are plenty of small ones to take the place of the larger ones.

Helps. Your sentence should have come after Griffin's.

(*Note.* — We then went back to the first child and had all sentences reviewed. The pupils decided that the eighth child should give his sentence after the fourth. So each time we reviewed the finished product, this child put his sentence in the correct place according to its continuity. I will give the remainder as it was when finished.

9th child. Some people herd sheep with a dog. The dog chases the sheep together and they trample down the grass.

10th child. Other people herd sheep without a dog.

11th child. The Government thinks it better for the sheep-herders not to have dogs so the sheep may scatter about.

12th child. We then saw some coyotes.

13th child. The coyotes had a lamb which their mother had killed.

14th child. The Government tries to keep all the coyotes killed off.

15th child. We saw a motor to an airplane. It was a twelve cylinder Liberty motor. It had a double set of spark plugs so that if one set gave out the other would hold.

16th child. It weighed about 850 pounds.

17th child. The propeller goes around 1600 times in one minute.

(*Note.* — When a child couldn't think of anything on that topic the help questions were: How much did it weigh? How many revolutions a minute did it make? (The latter from a boy.) What is a revolution? (From a girl.))

18th child. The airplane is used for fires. There must be two men or 150 pounds in the rear cockpit. The second man is also used as an observer.

(*Note.* — These sentences came from an observing boy, but at first he had all his information in one poorly worded sentence. It took him many minutes to work out his finished sentences.)

19th child. We then saw a radio set. We heard the message coming through it. It tells where the observer has found a forest fire.

20th child. We saw some pictures of forest fires. They looked very dangerous and did a lot of damage.

21st child. As we left the exhibit we were each given a pine cone picked from the highest trees in the Sierra Nevada Mountains.

The first fifteen children were fifth-grade pupils, the remainder were fourth-grade pupils.

To show you how easily this method may be used in reporting on any of our regular lessons, as for example the life of some man studied in history, the struggle of our pioneers, or simply an interesting story, I will give a few notes taken on the development of "The Ship of the Desert." The class heard the report of this but once. It was given by a fifth-grade pupil as a special report.

1st child. The camel is called the "Ship of the Desert."

2nd child. When a camel sees a black cloud ahead, it knows there is to be a sandstorm.

Helps. Alice started to describe the camel and you started the sandstorm. Is there anything between the camel's toes?

Same child. Between the camel's toes there is a pad that is used to prevent him from hurting his feet on the rocks.

Helps. Are there any rocks in the desert?

Same child. Between the camel's toes there is a pad to keep his feet from the burning sand.

Helps. Wouldn't you think the camel would sink in the sand with all that load on his back?

Same child. Between the camel's toes is a pad that is used to prevent him from sinking into the sand.

3rd child. When a camel sees a black cloud —

Helps. You have started the storm again when we are still describing the camel. What preparation does a camel make for his trip?

Same child. The camel has many little cells around his stomach to hold extra water.

4th child. When the camel's real stomach gets empty, one of these little cells opens up and lets the water into the stomach.

(*Note.* — Help was given by pupils on pronunciation of the word *stomach.*)

5th child. The camel keeps its food in its hump. It has enough to last until it gets to an oasis.

We then reviewed the paragraph describing the camel. Two more paragraphs followed, one on the sandstorm that so many had insisted on starting in the wrong place, and the other one comparing the intelligence of a camel with that of a horse.

Here are several outstanding results obtained through this kind of work:

1. Children in preparing a lesson for development take greater interest in gaining facts because they wish to be helpers.

2. Psychologically we know that facts gained for *use* are retained longer.

3. The discussion and many repetitions tend to fix the facts in the mind of even the weakest.

4. Reviews are easily handled and serve as interesting material for visitors.

5. Children acquire the habit of giving good thoughtful sentences instead of short or meaningless ones.

6. Children are being trained to think for themselves individually as well as in a group.

7. Individual contributions to the recitation have a special worth because the final product is effected by the visible result of their combined efforts.

THE CLEARING HOUSE

THE STUDY OF HOLLAND—A FIRST GRADE PROJECT

Interest in Holland began with the reading by the class of *The Dutch Twins Primer*, by Lucy Fitch Perkins. At the same time the teacher began to tell to the children supplementary stories about Holland, Dutch folk stories and fairy tales, tales of travel and description, and true stories of the development of the country. She showed them pictures of Holland from books and magazines and on the walls she mounted many photographs and prints loaned by the Children's Museum and the Public Library of Brookline.

After about a week of being surrounded with such material, the class began to take a very active and increasing interest in Holland. Now they in turn began to bring in pictures from home, postals brought back by relatives who had been to Holland, pictures from papers, Dutch stories found in magazines, and Dutch books. They began to express their interest by making things Dutch. They made pin-wheels and took them out in the wind. Some children went on to construct more difficult windmills from clay, cardboard, and wood. The class wanted to make a scene from the Netherlands on the sand-tray. Among the first things they found it necessary to do was to prevent the land from becoming a mud-flat by constructing a dyke which should be impervious to water. For this purpose cement was judged to be the best material. The children built the dyke across the tray, about four inches high, of cement with stones for a foundation. On the south they poured in the high seas, dyeing the water with blue alabastine; on the north side they put the earth, not quite as high as the ocean, with a canal and a little inland lake, formed by cement. Trees were made of pieces of sponge cut to shape, with sticks run through for trunks, and then dipped in green dye. Churches, houses, little windmills, and people were made of clay and cardboard and placed along the banks of the canal or clustered around the lake. Grass-seed was planted over all the land. Fishing boats, steamers, and sailboats sailed in great numbers on the ocean or in the canal; a tall lighthouse of clay guided mariners into the harbor. A dog-cart ran along the top of the dyke.

One morning, when the children came to school, they found Holland rapidly becoming inundated, and there seemed to be no one leak for a Peter to stop with his finger. As a coat of shellac proved of no effect, a second dyke was made to replace the old one, and this time solid concrete was used. But very gradually this, too, leaked. Then followed anxious days of trying to keep the North Sea in its proper bounds. Shellac, putty, glue, cement filling, and finally melted paraffin were tried and the last worked sufficiently well to let in only enough water between the concrete and the smooth surface of the tray for irrigation purposes. After that the scene was complete except for the constant repairing of the coastwise ships. The children spent one of their writing periods putting on record the work they had done in making this Dutch village.

Not only did the children take the initiative in the planning, building, and placing of this scene, but they wanted to make many more things "as they are in Holland." They drew many pictures of the land and the North Sea; they made Delft tiles and dishes from clay, with blue

decorations; some made Dutch caps to wear; some made little Dutch fishing boats; one made a "Dutch book"; some decorated the board with Dutch pictures in colored crayon; almost everyone made a flag of the United Kingdon of the Netherlands out of red, white and blue cambric, large enough to carry. All these things were made through the children's interest and activity, the teacher supplying the materials and helping when the many needs arose.

Wanting to learn more about Holland, the children asked so many questions that the teacher went to the Dutch consul with the children's inquiries and her own. "Ask him what the Dutch children do in school; ask him how they read and write; ask him how to count in Dutch"; and the all-important question, "Ask him how they keep the dykes from leaking," as one little boy said earnestly. The consul answered our questions and lent us several copies of *The Holland Express*, a magazine containing many beautiful pictures.

A family of Hollanders, whom we visited, told us the Dutch names for nearly all the children. They also taught the children a singing dance of their country, and carefully described authentic Dutch costumes. As the children continued to bring Dutch books from home, the teacher read to them each day from these, including all of *The Dutch Twins*, a larger book containing many additional stories of the adventures of "Kit and Kat." One of the other teachers, who had travelled in Holland, brought us her photograph book to enjoy; another teacher lent us her collection of Dutch pictures; a friend, some wooden shoes. Some stereoscopic slides were obtained from the library and a set of stereopticon slides was rented. When the children were shown these latter they were so delighted that they wanted to have others see them. Accordingly, at one of the lower school assemblies they showed these as their contribution, one little boy operating the machine, another directing him from the platform, and the children in turn coming up to the platform and explaining the pictures as each was flashed on the screen. During this lecture the children were entirely unaided by the teacher.

So absorbed had the class become after a month of this study that they wanted to play school in Dutch. As Hollanders use the same metric system, arithmetic seemed to be the subject most like ours, so arithmetic lessons were conducted after the formal Dutch fashion. This fitted in with the plan of the whole school for the Closing Day Exercises, in which each class was to represent child-life in some country they had been studying during the year. We asked if we might represent Holland. During each day of the last month our room became, during the arithmetic period, a Dutch schoolroom where the children took turns in being the teacher and conducting a lesson.

"One day as I was walking along the dyke near Amsterdam I saw a boy fishing. I said, 'How many fish have you caught?' He said, 'I caught four this morning and three this afternoon. How many did he catch in all? How many, Jan?" If Jan knew, he would answer and then write the combination on the board; if not, Henkie might be asked, or Jopie or Annie. The children begged to know how to "speak Dutch," so a Dutch grammar was consulted, and "Ja, das ist gude!" or "Das ist waar!" were phrases commonly used by the little teachers.

Meanwhile, the singing teacher had been helping the children learn folk-songs and the little wooden-shoe dance taught us by the Dutch people we had visited.

On the closing day our class gave a tableau. As a background there was a big windmill with arms turning, which had been made for us by boys of the school, and also a dog-cart with a real dog belonging to one

of the children in our class. When the school bell rang to break up their tableau, they delayed long enough to give their songs and dance and then went in to school with their slates, to the double benches waiting for them. The child whom they had elected as the teacher welcomed them formally in Dutch, conducted an arithmetic lesson, and dismissed them gravely. They were all in costumes which they had planned and measured.

Thus for two months during this study were correlated many school subjects. Their reading of *The Dutch Twins Primer* led the children to other reading of Dutch stories. Arithmetic was brought in through the Dutch school, and many combinations and the practical applications thereof were learned. Writing and spelling were used in the recording of their work in order to describe it to absent children, to invite parents to the play, etc; drawing, industrial arts, music, dramatizing, and geography were also involved.

That the children were keenly interested in this study was very evident. They talked of it continually at home; they begged to be called by their Dutch names throughout the morning; their entire free periods they devoted to making things Dutch. They seemed to gain a sympathetic interest in the country.

"If I ever go to Europe I shall go straight to Holland," said one little girl. "I'm certainly going to Holland some day in my life," said another; and still another, "Oh, didn't Kit and Kat have lots of fun!"

One of the values which the teacher gained from the study was the realization anew that children, before they show any active interest, must be thoroughly absorbed in the subject. A child cannot give out until he has taken in a great deal.

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GEOGRAPHY IN THE FOURTH GRADE

The work in geography in the fourth grade, Park School, Brookline, is based on the problem of home geography: Boston Harbor, its laws and regulations, its imports and exports, leading to a sense of world relations and interdependence commercially and industrially.

Last year, after a brief study of streets, avenues, and points of the compass in connection with local map study, the class went on a trip to the Custom House Tower to obtain a bird's-eye view of Boston Harbor. On their return the children started enthusiastically to make an enlarged map of Boston Harbor, from a study of the local maps. This was drawn to scale on beaver board, about $3\frac{1}{2}$ feet wide by a little over 8 feet long. The class divided itself into squads. One group took under consideration the laying out of the town, locating streets, avenues, and important building sites and later painting in suitable colors the streets, harbors, rivers, grass, and building sites. Show card colors were used.

At the same time other groups were constructing miniature buildings of clay which were painted later: little houses with pointed roofs for East Boston, flat-roofed houses for Boston proper, warehouses and gas-houses for South Boston, and barracks, etc., for Charlestown. Still another group was considering transportation and building structures for elevated trains and bridges. Other groups had charge of the Custom House Tower, the Navy Yard, and historical buildings including the Old North Church and Faneuil Hall. Shipping meanwhile had been taken care of by another group. A few steamers and ships had been made and painted for the harbor; the reason for the United Fruit steamers being painted white filled the class with especial interest because the grandfather of one of the children originated the idea for this.

The white paint deflects the heat, thus helping to keep the fruit in good condition.

All the buildings and shipping had been kept in proportion. When it came time to consider railroad transportation, the difficulty in making trains and automobiles small enough, without spending undue time upon it, was solved by the gift of a toy train and automobile. The idea was taken up and accepted.

The detailed knowledge required by the children to carry through this undertaking is hard to grasp in its entirety. First, all working together on the map; second, dividing into groups to construct the various buildings that go into the making up of a city; third, the assembling of everything on the map. Here the children clearly showed, by their careful placing of everything in its correct location, the result of the thoroughness of the preceding work, the slightest doubt being immediately settled by research.

At last every group was ready with its especial contribution, the map was ready to be assembled — "the Port of Boston" in miniature was a reality.

COAL

The question uppermost in the minds of everybody that winter was "coal." That it would be so was early realized, so the English coal barges at anchor in the harbor were particularly brought to the children's attention in our trip. They had only waited to complete their first piece of work before starting on this new and vital subject. The value and uses of the different kinds of coal were discussed, both in the classroom and at home. Interested children brought specimens, and much information about mining was gained through books, newspapers, and home discussions. Parts of *A Year in a Coal Mine* were read to the children.

During the weeks when the shipping was being constructed, great interest was shown in the daily "Ship News." This was brought to class when "father" could be induced to part with this important page of his paper. This led to a detailed study of exports and imports.

About this time a representative from the American Junior Red Cross came to the school to tell of the correspondence work being organized by them. The children chose Argentina to form a contact with and contributed generously of their most prized work. As Argentina had not then accepted the Red Cross proposition, this collection went to Costa Rica, which in due time sent back a return collection.

THE PROJECT CONTINUED

It was my great privilege to carry on the project with this year's fourth grade, always helped by the vivid interest and helpful criticism of Mrs. Harris, who had planned the course. After a brief study of the local maps the children provided automobiles and, accompanied by several enthusiastic parents, with a teacher in direct charge of each car, we went to the Custom House Tower, the Fish Pier, and the South Boston Army Dry Dock. Immediately on our return we assembled the map on the basis of the information gathered. This led to a study of the three railroads and their wharf facilities, piers, harbor regulations, port administration, quarantine rules, pilot rules and regulations, loading and discharging vessels, coaling of ships, and general warehouse rules.

SAFEGUARDS AT SEA

The children also looked up information about other dry-docks and fish piers, which included the general fishing conditions on the Grand Banks, and whaling. The great necessity for lighthouses was clearly shown, and the class became so interested in the story of the hardships undergone in the building of Minot's Light that we looked up and studied the most famous

lighthouses here and abroad, from ancient times to the present day. Group scrapbooks were made, containing crayon drawings of different lighthouses, several children bringing drawings which they had painted at home. Going on to a study of lightships, the children again begged to make a group scrapbook of crayon pictures, the great majority choosing to portray the "Nantucket Lightship" as several of the children have summer homes in this vicinity. While talking about the general safeguards at sea, the children brought to class books, pictures, and much information of coast-guard stations and their work. During this time we read about several famous shipwrecks, the most well known being that of the *Titanic*. The iceberg peril was discussed and we learned how it has been met and controlled through our coast-guard service. The class also learned how the installation of wireless and its use on board ships came about as a direct result of this tragedy.

SHIPS AND THEIR CARGOES

Going on to shipping in general, we first looked up information from various sources and then made models from clay of clippers, schooners, brigs, sloops, tugs, battleships, steamers (indicating the different lines by the color of the smokestacks, etc.), coal barges, pilot boats, and ferries. Next, the sailboats were correctly rigged, from the magazines and books the children brought to class showing rigging details. Toothpicks were used for our masts, and white paper for sails, which were sewed on. This done, the boats were first painted and then both masts and boats were shellacked. In connection with the pilot boats we found we needed more information in regard to tides.

At this time it was discovered that our Custom House Tower was unsafe, so the class decided to compete for the honor of constructing a new one. Several pictures were provided for models. The boy whose building was finally chosen spent several hours after school perfecting his piece of work.

EXPORTS AND IMPORTS — WOOL

This study of ships and their cargoes brought about a collection of the daily "Ship News," which at that season was reporting tremendous quantities of wool from South America and Australia, and cotton from Egypt. The study of these exports and imports impressed the class with the fact that Boston is a great wool port and market. This led to a study of how and where sheep are raised, which study, in its turn, brought out the effect of heat and cold on shepherding, thus leading us to a study of world climate. Next came the comparison between old and new methods of shepherding. Our charts of the relative quantity of wool production in wool countries of the world made necessary a study of continents and foreign countries that export wool to Boston. World maps, showing wool distribution, were made. Then the children wished to designate the greatest wool centers of their own country, so again they made maps, thus naturally becoming familiar with the names of our own states. The transportation of wool to Boston raised the question of the relative expense of land and water routes, and we learned what effect the opening of the Panama Canal had upon it. Other canals were looked up, including the Erie, Suez, Kiel, etc. In order to care for this vast amount of wool from domestic and foreign sources we learned how the City of Boston, Commonwealth of Massachusetts, and the United States Government have all contributed docks, connecting railroads, and storage warehouses.

One of the parents made possible a trip to a wool market; there we procured samples of wool from many of our states, and also from other countries of the world.

Incidentally, the class saw how it is possible for a wool dealer to know about the soil from his wool fleeces. About this time several of the boys went to the Textile Show at Mechanics Building and came back filled with information about the various methods used in the manufacture of woolen goods.

This threw open the gates to the vast field of study of raw products required for essentials of clothing, food, and shelter.

A boy, whose forebears established the first linen mills in this country, prepared and delivered a most creditable lecture on linen at assembly, illustrated with flax in various stages of growth and manufacture. The interesting phase of this was that the boy, at the time his interest took fire, was unaware of family interests. Another child was responsible for a most interesting scrapbook concerning transportation, filled with pictures he had collected during a period of several months. Collections of different kinds of leather were made by another child whose father was interested in the leather business, and maps were planned to show the centers of the great packing house industry.

Going on to a more detailed study of food, a trip to the Orchid Show at Horticultural Hall, just about this time, made vivid certain facts regarding tropical vegetation. The child who had constructed a "United Fruit Steamer" earlier in the year, having written for and received information regarding its cargo, brought to class many interesting facts about bananas. This in turn led to a brief survey of the soil, climate, and methods best suited to the raising of fruit and vegetables. This study included the effect of various types of storms and their causes, the cyclones and tornadoes in our own country, and the monsoons in the eastern countries.

HELEN C. NEWTON,
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AS REPORTED

MEETING OF THE N. C. P. E. IN CINCINNATI

The National Council of Primary Education celebrated its tenth anniversary in the city and hotel of its origin. The Cincinnati Primary Council planned the affair in a most beautiful and happy way, a large birthday cake with ten candles on it giving a true party air.

During the entire existence of the Council Miss Ella Victoria Dobbs, of the University of Missouri, has been its most efficient and devoted chairman. In appreciation of this service Miss Lily Ernst of St. Louis, on behalf of the Council, presented her with a life membership in the National Education Association. Miss Dobbs responded, expressing her sincere appreciation of the gift and also of the coöperation of Council workers throughout the country during the past ten years. She recalled the original meeting with its thirty enthusiastic charter members, many of whom were seated at a special table honoring this occasion, and told of the wonderful growth of the Council to its present membership of approximately four thousand. With the earnest effort characteristic of local and state groups in all parts of the United States, she predicted increasing activity and usefulness.

The Council's programs are always informal—a general discussion of some question that has arisen frequently enough in previous meetings to make its importance compelling. This time the question was, "How can we protect the child's day from undue adult interruption?" It was opened by Dr. Josephine Young of Chicago, who took up the phase, "Interruption and Emotional Reaction." L. L. Caldwell of Hammond, Indiana, spoke of organizing the program in larger units, and Miss Rasom, a first-grade teacher of Cincinnati, brought up some of the teacher's problems and experiments. Discussion followed.

The Council has always stood for greater freedom of activity for children, greater freedom of method for teachers, and closer coöperation of grades above and below. Not only groups but individual members everywhere have become more keenly analytical of purposes, methods, and results — self-analytical. Standards have been raised and wholesome growth inspired. At the business session of the Council, Miss Lucy Gage of Peabody College, Nashville, Tennessee, was elected chairman. It is with the same spirit of service that has animated her predecessor that the new leader faces her task, and all members share with Miss Dobbs in her confidence in the Council's future.

ALTA ADKINS,
Secretary.

THE PRESSEY SURVEY

A nation-wide survey of capitalization, punctuation, grammar, and sentence structure in the work of school children has just been completed by the Public School Publishing Company of Bloomington, Illinois. Returns from 130,000 children have been scored. Those interested in the test used and in the results obtained may write to the Company or to the author of the test, Professor Sidney L. Pressey, of the University of Indiana.

STUDY GROUPS OF THE SEATTLE PRINCIPALS' ASSOCIATION

The regular professional programs held by the Seattle Principals' Association once a month are supplemented by the intensive study and discussion in several small study groups of outstanding methods and problems of present day education. There are four of these groups meeting regularly. Of these the one of longest standing is the Principals' Study Club, organized in 1916.

The topic, "The Principal and the Improvement of Instruction," was the basis of work for last year. Each one reported upon his own particular activity along this line. The effect of such a study was stimulating and excellent reports were made on reading in all grades; upon language, oral and written, and upon spelling and geography. A special study was made of arithmetic in the lower and intermediate grades, and pupils' difficulties in fractions were diagnosed and remedial measures worked out.

For the first half of this year the work of the club has been a study of lesson assignments of various types. It is also making a study of ways of diagnosing pupils' difficulties and what definite means are being used to overcome them.

The second of these groups to be organized was the Five O'Clock Club, which came into existence about 1920. The subject for discussion in this club last year was Cubberley's *The Principal and His School.* This intensive study was supplemented by reports by the Superintendent of Schools and members of his staff on the meeting of the Department of Superintendence, the N. E. A., and a visit to California schools. Various members of the club also reported on their summer work at the great universities of the country.

The work of the present year consists of a definite study of language as taught in several of the buildings represented in the club, an intensive study of the results of the

Monroe Reading Tests given in the Seattle Schools last fall, and a consideration of supervised study based on a bibliography prepared by Dr. Reavis.

The Educational Research Club, organized about three years ago, has lived up to its name in work planned and accomplished. This group in its first year made a very definite study of educational tests and measurements. The following year the "Stone Silent Reading Tests" were given in the buildings of the eleven members and the results carefully studied. This year's program is based on Thomas's *Pupils' Study Habits*. After a very careful study of the book an outline has been made out covering particularly the poor study habits of pupils. Committees of the club members are working on the various school subjects from this angle and helpful suggestions are to be made from their findings.

The last of the professional study groups is the Monday Evening Club, organized by a group of women principals in the fall of 1923. It has as its objectives concrete research work, the encouraging of high ethical standards, and the promotion of good fellowship. The study taken up last year was individual instruction. The work this year centers around the subject of "Character Training in the Seattle Schools." Six of the schools represented in this group were included in the nation-wide survey of language made in November. Very interesting material for discussion and diagnosis was furnished by the results of these tests.

BELLE DIRIMPLE,
Principal of the Ross School,
Seattle, Wash.

ANNUAL HEALTH EDUCATION CONFERENCE

At the invitation of the University of Chicago, the fourth annual working conference in health education is to be held June 22 to 26, inclusive, at Chicago, Illinois. This conference is called by the Health Education Division of the American Child Health Association and will be limited to 150 participants.

The conference discussion will center around "The Training of Teachers for Health Education." Consideration will be given not only to the health programs in teacher training institutions but also to the extension courses in health education for teachers in service. The health program of secondary schools in its relation to the teacher training problem will be discussed.

Registration for the conference must be made by June 1. Address Emma Dolfinger, 370 Seventh Avenue, New York City.

A NEW INFORMATION SERVICE

The National Child Welfare Association, Incorporated, with headquarters at 70 Fifth Avenue, New York, is rapidly extending the scope of its educational aids. It offers a considerable list of educational posters dealing with health, character development, and citizenship. Lately it has begun the publication of a Monthly Loose Leaf Educational Information Service. A recent number typical of the series is devoted to the school library. This contains suggestions as to how the library can be made effective, together with numerous references from which material may be procured.

THE READER'S GUIDE

THE IMPROVEMENT OF THE PRIMARY SCHOOL

Everyone knows that marked progress has been made in the improvement of both organization and instruction in the primary school. Few, however, have so comprehensive a grasp as is shown by Miss Moore in her recent book.[1] Her treatment is that of a philosophic weighing of issues, with common-sense deductions throughout. She begins by showing the changes that are necessary in order to make the school environment fit the children. Then follows an account of the place of the kindergarten in the primary school, the nature and value of the newer types of purposeful activity, and the characteristics of the newer and better handling of such school subjects as language, reading, literature, and arithmetic.

The treatment is concrete, much of the material consisting of photographs of children at work, accounts of actual recitations, and reports of investigations. The teaching of beginning reading, for example, is remarkably clear and comprehensive in spite of the fact that less than seventy pages could be devoted to it. The writer has kept pace with the developments in this field and has selected out of a mass of material available the points on which beginning teachers and teachers in service will particularly need help.

The bibliographies are excellent and up to date and the chapters are completed with exercises set down for use in actual class work in teachers' colleges and in extension courses.

J. F. H.

A FIRST BOOK IN PROJECT TEACHING

Teachers are now ready for systematic help in project teaching. To be of the greatest service, the first help should be both simple and convincing. The brief book by Hosic and Chase has these qualities to a notable degree. *Brief Guide to the Project Method*[2] is, as its authors claim, a handbook for teachers; and in being consistently such, the book is better present help than if it were more exhaustive in its treatment. It is small enough to appeal to the busy worker and to the inexperienced beginner; and at the same time it affords abundant challenge for further work.

Among the many commendable features of the book are: (1) the lists of problems and selected references at the ends of chapters; (2) the well-chosen and clearly printed illustrations; (3) the recognition given to the teachers who worked out the projects that are utilized as illustrations; (4) the noting of time required for the projects. (This would be even more helpful had the approximate time cost per day been added); (5) the brief and pithy interpretation of the various school subjects as given in Part III. No progressive teacher can read the enticing extracts quoted there without being drawn to a more complete study as afforded by the sources to which frequent reference is specifically made.

Part III is also notably valuable in that it indicates the relationship between project teaching and the traditional school subjects. Teachers will be helped to see that project teaching utilizes much of existing

[1] *The Primary School—The Improvement of its Organization and Instruction.* By Annie E. Moore. Houghton Mifflin Co., 1925.
[2] *Brief Guide to the Project Method.* By James F. Hosic and Sara E. Chase. World Book Company, 1924.

subject matter but in new and vitalized forms. The effectiveness of Part III would be increased by an introductory note stating that the brief treatment there given indicates the attitude of teacher and pupil toward the traditional school subjects when learning goes forward by projects.

The book bears convincing evidence of the outstanding fitness of the authors for this type of work. Professor Hosic is one of the few men who were teaching by projects before the term was in the educational vocabulary, and he has recently applied himself diligently and effectively to the philosophy underlying the project idea. Principal Chase has also evidently been teaching by projects for some years. Her illustrations indicate one of the reasons for the high rating accorded the work of the Hackensack schools. She was obviously a potent member of the corps of high class supervisors that helped Superintendent Stark to place Hackensack among the best schools of which we have survey evidence.

It is to be hoped that the authors will devote themselves to the preparation of a more complete treatment of project teaching. Their present volume is certain to create a need for such a book.

CLIFF W. STONE,
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State College of Washington.

SIGNIFICANT ARTICLES

TRAITS OF X, Y, AND Z PUPILS

The grouping of pupils in school according to ability implies that there are distinguishable differences in the characteristics and attainments of these pupils. A study of such differences among the pupils in the Sampson School in Detroit has been made by Miss Ruby Templeman and is reported in the *Detroit Educational Bulletin* for February. The writer groups her points under the following heads: attention, interest, muscular coördination, comprehension, character traits, and discipline. Miss Templeman concludes that if results obtained by investigation in this school are supported by similar investigations elsewhere, the foundation will have been laid for the planning of courses of study and the development of method of treatment appropriate to pupils of inferior, ordinary, and superior ability.

VARIABILITY IN READING COURSES

A systematic study of twenty-one reading systems as embodied in primers and first readers, teachers' manuals, and supplementary materials is reported by Professor Arthur I. Gates in the *Teachers College Record* for March. Professor Gates was assisted by Miss Esther Hemke and Miss Dorothy Van Alstyne. The investigators found great variation in such matters as the presence and length of time of a preprimer period, the method of approach — whether through letters, words, phrases, sentences, or paragraph units — the teaching devices employed, including oral story-telling, dramatization, blackboard reading, flash cards, etc., the employment of systems of phonics, and the use of various types of games. The mechanical characteristics, the distribution of prose and poetry, and the size of the vocabulary included were equally at variance. The authors conclude that not all of the plans can be equally valuable. Courses in the beginning reading should be much more intensively studied so as to avoid the formation of bad habits. The amount of remedial work now necessary in the intermediate grades is no doubt traceable in large measure to the unscientific character of instruction in the earlier years.

PUPIL ACTIVITIES IN ELEMENTARY ENGLISH TEXTS

A similar though less exhaustive study of texts in elementary language and compo-

sition is reported by Miss Clara Axie Dyer in the *Elementary English Review* for January. Eight series of books were examined, four for intermediate grades and four for junior high school grades. The latter include both the grammar grades of the regular elementary school and the corresponding grades of the junior high school. The main distinction which the author sets up is that between assignments having to do with expression activities and those having to do with non-expression activities. She finds an undue proportion of the latter and strongly urges that textbook-makers in the future increase the amount of space devoted to activities involving actual expression. This and similar conclusions appended to the article are, of course, based wholly on personal opinion.

RATING TRAIT CHARACTERISTICS

In the *Educational Research Bulletin* of the Pasadena City Schools, Mr. Hughes follows up the discussion of the rating of capacities, attitudes, and interests which he presented in the JOURNAL OF EDUCATIONAL METHOD for October, 1923. He lays down a series of guiding principles for the rating of trait characteristics. These include: clear definition of terms; choice of significant situations; consideration of relativity; concentration on a single quality; competency on the part of the rater; freedom from emergency; and the pooling of many judgments. He provides a table for the use of teachers in rating characteristics, and shows in detail how this table should be used.

SCIENTIFIC STUDY OF INSTRUCTION

An inclusive program for the scientific study of teaching is outlined in *School and Society* for March 14 by Professor Hines of the University of Cincinnati. After a brief survey of the history of the movement for the scientific study of education, the writer presents what he regards as the one big fallacy, namely, "that we must measure the results of instruction in order to help *standardize* instruction." Mr. Hines would first determine what subject matter may best be taught to children of different types of ability and would then measure with the one purpose of providing the teacher with a record of the individual differences among her children. He would also find out, if possible, why children fail, would attempt to secure types of persons as teachers who attain at least average merit, and would make special provision for those pupils who are below normal intelligence.

THE NEW BOOKS

Instinct, Intelligence, and Character: An Educational Psychology. By Godfrey H. Thomson. New York: Longmans, Green & Co., 1925. Pp. 282. $3.50 net.

Bible Readings for Schools and Colleges. Edited by John M. Thomas and A. Howry Espenshade. New York: Macmillan Co., 1925. Pp. xx+288.

The Mental Growth of the Pre-School Child. By Arnold Gesell. New York: Macmillan Co., 1925. Pp. 447.

The American Arts College. By Frederick J. Kelly. New York: Macmillan Co., 1925. Pp. 198.

Fifty-eighth Annual Report of the Maryland State Board of Education. Baltimore, Md.: 20th Century Printing Co., 1925. Pp. 278.

Child Marriages. By Mary E. Richmond and Fred S. Hall. New York: Publication Dept., Russell Sage Foundation, 1925. Pp. 159. $1.50.

The Light Bearers — Stories of Old Greece. By Aldis Dunbar. Chicago: Beckley-Cardy Co., 1925. Pp. 194. Illus. $.80.

Eight French Plays. By Carolyn H. Strong. Baltimore, Md.: Norman Remington Co., 1925. Pp. 120. $.90.

The Story of the University of Chicago, 1890–1925. By Thomas Wakefield Goodspeed. University of Chicago Press, 1925. Pp. xvi+244. Illus.

An Introduction to Teaching. By Ned H. Dearborn. New York: D. Appleton & Co., 1925. Pp. xvi+337.

Self-Improvement in English. By H. W. Davis. Garden City, N. Y.: Doubleday, Page & Co., 1925. Pp. 438. $1.60.

Measurements and Standards in Religious Education. By Walter S. Athearn et al. New York: Doran Co., 1924. Pp. 532. $5.00.

Educational Measurements and the Classroom Teacher. By A. R. Gilliland and R. H. Jordan. New York: Century Co., 1924. Pp. 269. $2.00.

Contes Faciles. Edited by Suzanne Roth. New York: Allyn & Bacon, 1925. Pp. 235. Illus. $.80.

Favorite French Stories. Edited by Clifford S. Parker. New York: Allyn & Bacon, 1925. Pp. 323. Illus. $.80.

How to Teach Phonics. By Mary L. Dougherty. Boston: Houghton Mifflin Co., 1925. Pp. xii+89. $1.20.

The School Survey. By Jesse B. Sears. Boston: Houghton Mifflin Co., 1925. Pp. xxx+440. $2.25.

Addresses and Proceedings of the Sixty-Second Annual Meeting of the N. E. A. Volume 62. Washington, D. C.: 1201 Sixteenth St., N. W. Pp. xiv+1085.

The Fundamentals of Statistics. By L. L. Thurstone. New York: Macmillan Co., 1925. Pp. xvi+237.

Educating for Freedom. By Edward O. Sisson. New York: Macmillan Co., 1925. Pp. xxiv+225.

The Story of Human Progress. By Leon C. Marshall. New York: Macmillan Co., 1925. Pp. xvi+548.

Poole's The Harbor. Edited by E. B. Richards. New York: Macmillan Co., 1925. Pp. 494.

Compendio de Historia Hispanoamericana. By D. Carlos N. y Lamarca. Edited by Roy Temple House and Carlos Castillo. Chicago: Scott, Foresman & Co., 1925. Pp. 315. Illus. $1.60.

IN PAPER COVERS

How to Study Modern Languages in College. By Peter Hagboldt. University of Chicago Press, 1925.

Observations of Intelligence in Illinois High Schools. By Charles W. Odell. Urbana, Ill.: University of Illinois Bulletin No. 22, 1925. $.30.

Reports reviewed and presented by the Educational Finance Inquiry Commission under the auspices of the American Council on Education, Washington, D. C.: *Unit Costs of Higher Education*, by Edwin B. Stevens and Edward C. Elliott, pp. 212. *The Financing of Education in Iowa*, by William F. Russell et al., pp. 279. New York: Macmillan Co., 1925.

Luther Burbank — Scientist, Philosopher, Man. San Francisco: California Teachers' Association Bulletin, March, 1925.

Annual Report of the American Telephone and Telegraph Company for 1924. New York: 195 Broadway.

Worth-while Patrons' Meetings. Baltimore, Md.: State Department of Education, Maryland School Bulletin, Vol. VI, No. 6, March, 1925.

Studies in Secondary Education, II. By William C. Reavis et al. University High School, University of Chicago, Supplementary Educational Monographs, No. 26, February, 1925.

A Uniform Financial Procedure for the Public Schools of Michigan. Michigan State Teachers' Association, Lansing, Mich., Bulletin No. 4, Part I.

Detroit Word Recognition Test. By Eliza F. Oglesby. Yonkers, N. Y.: World Book Co., 1925.

Better-Speech Year. Prepared under the supervision of the Joint Committee on American Speech, Glenn N. Merry, Chairman. Chicago: National Council of Teachers of English, 506 W. 69th St. $.35.